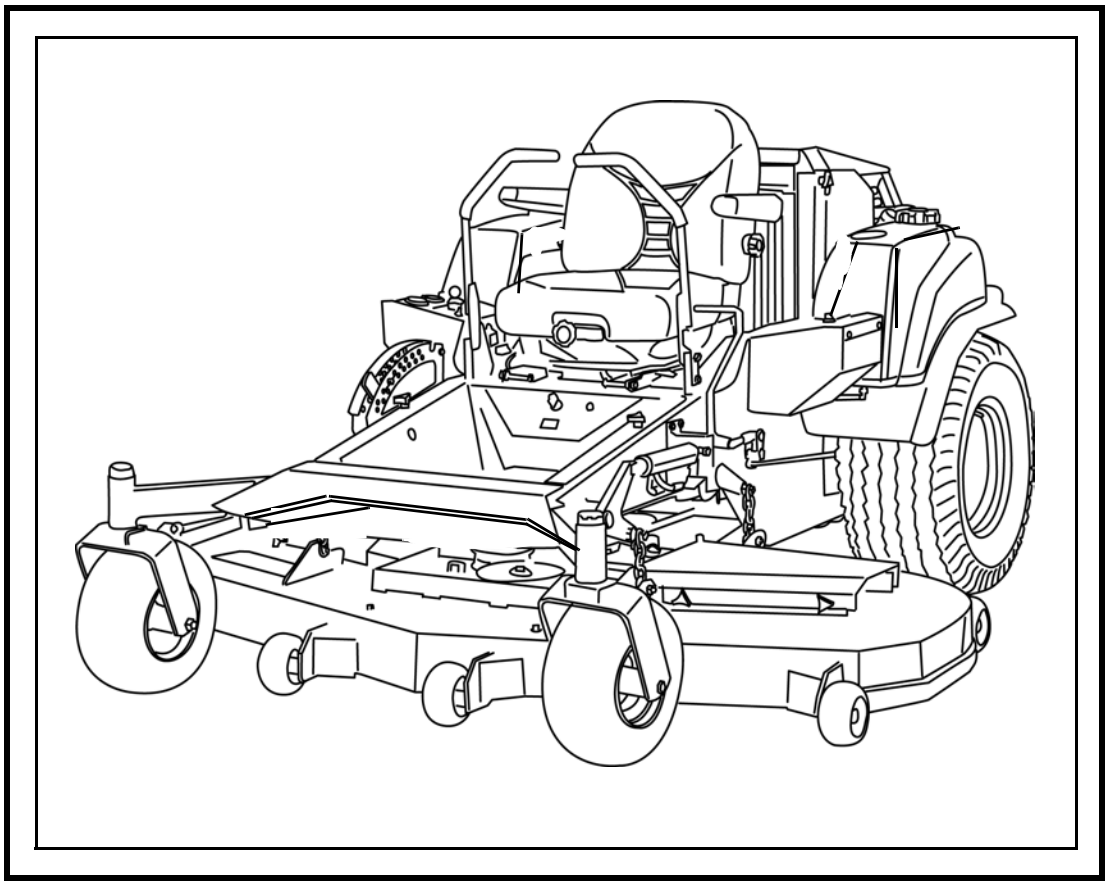
YAZOO/KEES



Operators Manual

Models:

ZHDD61270
ZHDD61340
ZHDD72340

Please read these instructions carefully and make sure you understand them before using the machine.

MANUAL NO. 106396 REV. 01 (06/10/03)

OPERATOR'S MANUAL

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INTRODUCTION

Introduction

Congratulations

Thank you for purchasing a Yazoo/Kees ride-on mower. This machine is built for the greatest efficiency and rapid mowing of large areas. Conveniant controls and a hydrostatic transmission regulated by steering levers also contribute to the machine's performance.

This manual is a valuable document. Following the instructions (use, service, maintenance, etc.) can considerably increase the lifespan of your machine and even increase its resale value.

If you sell your machine, be sure to give the operator's manual to the new owner.

The final chapter of this operator's manual comprises a Service Journal. Ensure that service and repair work is documented. A well kept service journal reduces service costs for the season-based maintenance and affects the machine's resale value. Take the operator's manual along when the machine is left at the service center for service.

General

In this operator's manual, left and right, backward and forward are used in relation to the machine's normal driving direction.

Driving and Transport on Public Roads

Check applicable road traffic regulations before driving and transporting on public roads. If the machine is transported, you should always use approved fastening equipment and ensure that the machine is well anchored.

Operating

This machine is constructed only for mowing grass on lawns and other free and even ground without obstacles such as stones, tree stubs, etc. The machine can also be used for other tasks when equipped with special accessories provided by the manufacturer, for which the operating instructions are provided in conjunction with delivery. All other types of use are incorrect. The manufacturer's directions concerning operation, maintenance, and repairs must be carefully followed.

The machine must only be operated, maintained, and repaired by persons that are familiar with the machine's special characteristics and who are well versed in the safety instructions.

Accident prevention regulations, other general safety regulations, occupational safety rules, and traffic regulations must be followed without fail.

Unauthorized modifications to the design of the machine may absolve the manufacturer from liability for any resulting personal injury or property damage.

INTRODUCTION

Good Service

Yazoo/Kees's products are sold only in specialized retail stores with complete service. This ensures that you as a customer receive only the best support and service. Before the product is delivered, the machine has, for example, been inspected and adjusted by your retailer, see the certificate in the Service Journal in this operator's manual.

When you need spare parts or support in service questions, warranty issues, etc., please consult the following professional:

This Operator's Manual belongs to the machine with manufacturing number:	Engine	Transmission

Manufacturing Number

The machine's manufacturing number can be found on the printed decal affixed to the left side of the frame under the seat.

- The machine's type designation (I.D.).
- The manufacturer's type number (Model).
- The machine's serial number (Serial no.)

Please state the type designation and serial number when ordering spare parts.

The engine's manufacturing number is stated on a decal. This is placed on the right side on the top of the engine.

- The engine's serial number (E/NO).
- The engine's type designation (Code).

Please state these when ordering spare parts.

The hydraulic pump's manufacturing number is stated on a barcode decal affixed to the left side of the pump housing. The plate states:

- The pump's type designation.
- The pump's serial number.

The hydraulic motor's manufacturing number is stated on a round metal plate. This is placed on the gable inside the motor. The plate states:

- The hydraulic motor's type designation and design version.
- The hydraulic motor's serial number.

SYMBOLS AND DECALS

Symbols and Decals

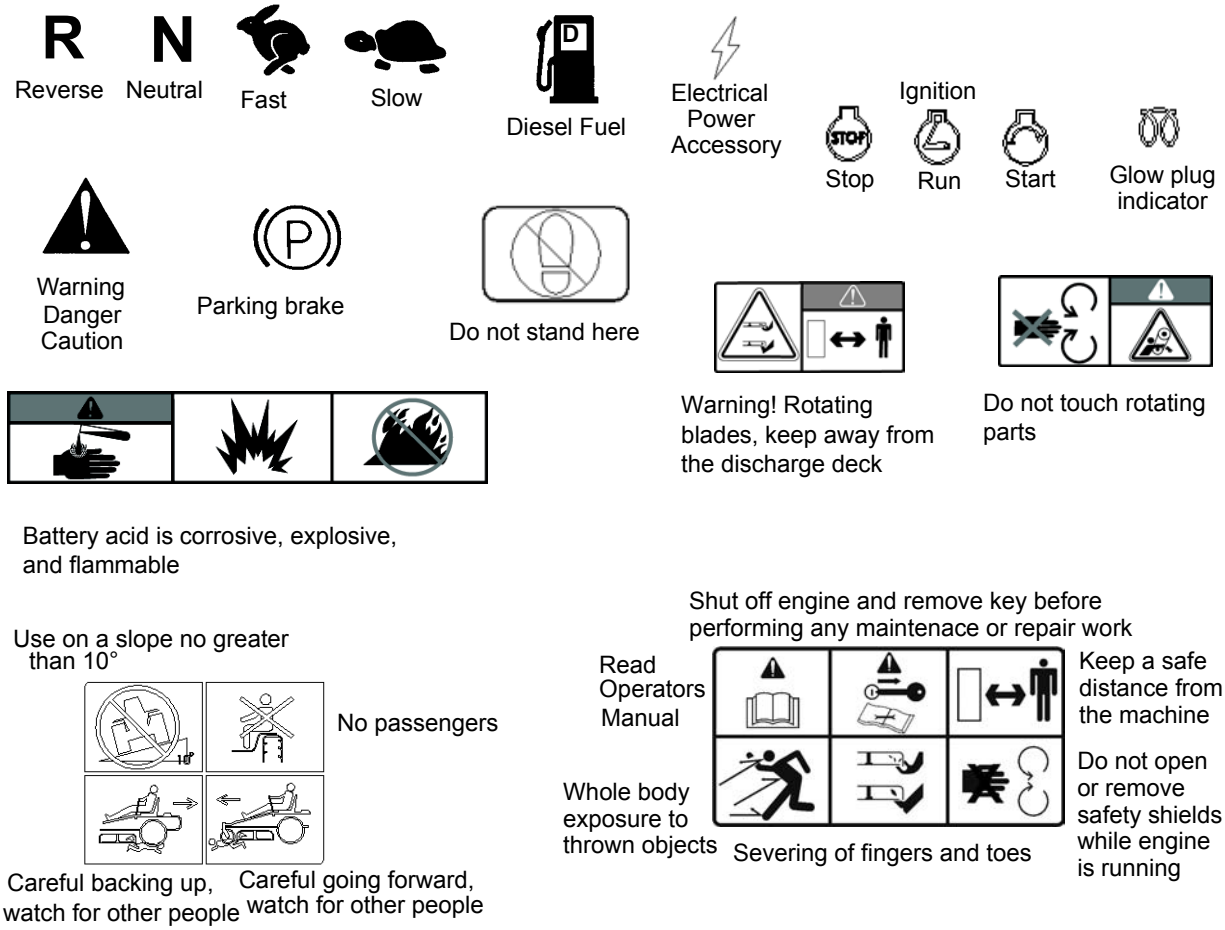
These symbols are found on the machine and in the operator's manual.
Study them carefully so that you know what they mean.

WARNING!
Xxxxxxx xxxx xxxxxxxx xxx x
Xxxxx xxxxxx xx.
xx xxxxxxxx xxxxx xxx xx.

Used in this publication to notify the reader of a risk of **personal injury**, particularly if the reader should neglect to follow instructions given in the manual.

IMPORTANT INFORMATION
Xxxxxxx xxxx xxxxxxxx xxx xxx
xxxx xxxxxx xx.

Used in this publication to notify the reader of a risk of **material damage**, particularly if the reader should neglect to follow instructions given in the manual. Used also when there is a potential for misuse or misassembly.



Safety Instructions

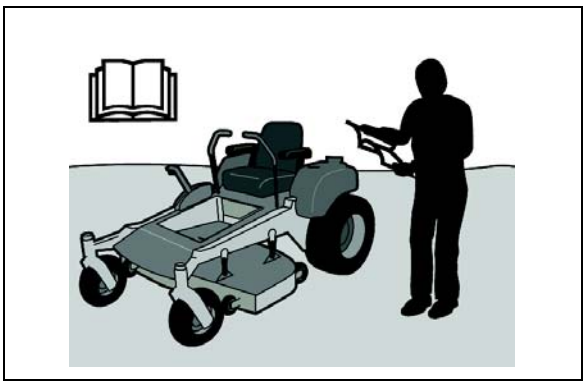
These instructions are for your safety. Read them carefully.

WARNING!

This symbol means that important safety instructions need to be emphasized. It concerns your safety.

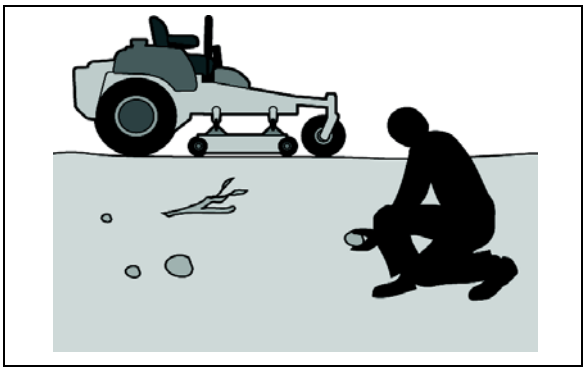
General Use

- Read all instructions in this operator's manual and on the machine before starting it. Ensure that you understand them and then abide by them.
- Learn how to use the machine and its controls safely and learn how to stop quickly. Also learn to recognize the safety decals.
- Only allow the machine to be used by adults who are familiar with its use.
- Make sure nobody else is in the vicinity of the machine when you start the engine, engage the drive, or run the machine.
- Make sure animals and people maintain a safe distance from the machine.
- Stop the machine if someone enters the work area.
- Clear the area of objects such as stones, toys, steel wire, etc. that may become caught in the blades and thrown out.
- Beware of the discharge deck and do not point it at any one. Do not use the machine without the discharge deck in place.
- Stop the engine and prevent it from starting before you clean the discharge deck.
- Remember that the operator is responsible for dangers or accidents.
- Never take passengers. The machine is only intended for use by one person.
- Always look down and behind before and during reversing maneuvers. Keep a look out for both large and small obstacles.
- Slow down before turning.
- Shut down the blades when not mowing.



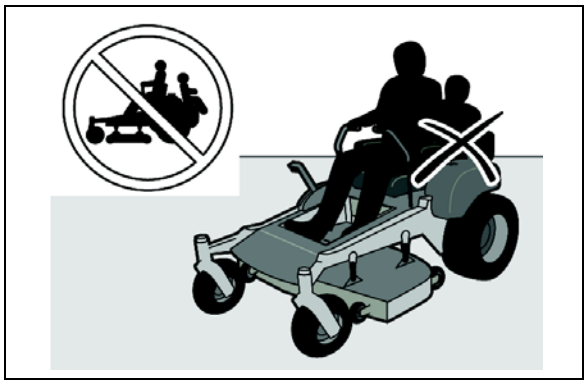
8011-512

Read the operator's manual before starting the machine



8011-513

Clear the area of objects before mowing



8011-520

Never take passengers

SAFETY INSTRUCTIONS

- Be careful when rounding fixed objects, so that the blades do not hit them. Never drive over foreign objects.
- Only use the machine in daylight or in other well-lit conditions. Keep the machine a safe distance from holes or other irregularities in the ground. Pay attention to other possible risks.
- Never use the machine if you are tired, if you have consumed alcohol, or if you are taking other drugs or medication that can affect your vision, judgment, or coordination.
- Beware of traffic when working near or crossing a road.
- Never leave the machine unsupervised with the engine running. Always shut down the blades, pull back the parking brake, stop the engine, and remove the ignition key before leaving the machine.
- Never allow children or other persons not trained in the use of the machine to use or service it. Local laws may regulate the age of the user.

WARNING!

Engine exhaust and certain vehicle components contain or emit chemicals considered to cause cancer, birth defects, or other reproductive system damage. The engine exhaust contains carbon monoxide, which is a colorless, poisonous gas. Do not use the machine in enclosed spaces.

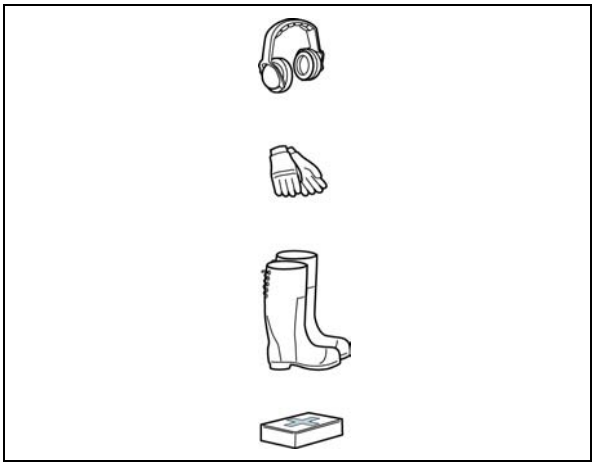
8011-518

Keep children away from the work area

WARNING!

When using the machine, approved personal protective equipment shall be used. Personal protective equipment cannot eliminate the risk of injury but it will reduce the degree of injury if an accident does happen. Ask your retailer for help in choosing the right equipment.

- Make sure that you have first aid equipment close at hand when using the machine.
- Never use the machine when barefoot. Always wear protective shoes or boots, preferably with steel toecaps.
- Always wear approved protective glasses or a full visor when assembling or driving.
- Never wear loose clothing that can get caught in moving parts.



8011-292

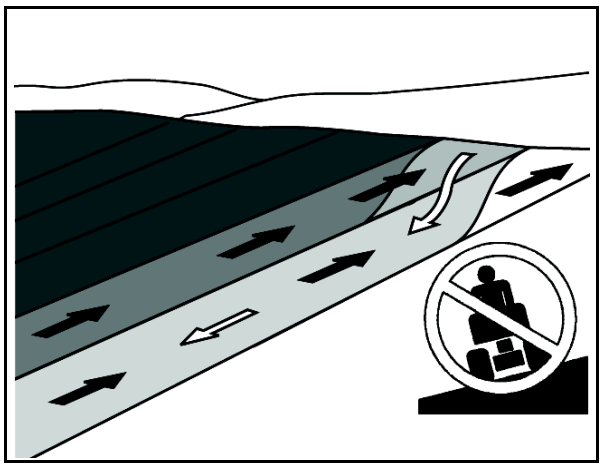
Personal protective equipment

Driving on Slopes

Driving on slopes is one of the operations where the risk is greatest that the driver will lose control or the machine will tip over, which can result in serious injury or death. All slopes require extra caution. If you cannot reverse up a slope or if you feel unsure, do not mow the slope.

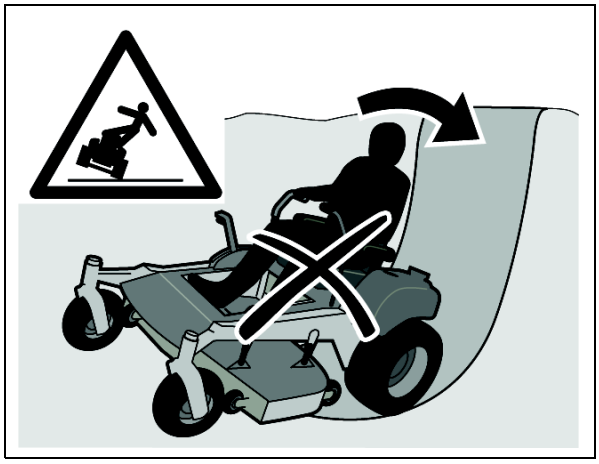
Do as follows

- Remove obstacles such as stones, tree branches, etc.
- Mow up and down, not side-to-side.
- Never drive the rider on terrain that slopes more than 10°.
- Avoid starting or stopping on a slope. If the tires begin to slip, shut down the blades and drive slowly down the slope.
- Always drive evenly and slowly on slopes.
- Make no sudden changes in speed or direction.
- Avoid unnecessary turns on slopes, and if it proves necessary, turn slowly and gradually downward, if possible.
- Watch out for and avoid driving over furrows, holes, and bumps. On uneven terrain, the machine can tip more easily. Long grass can hide obstacles.
- Drive slowly. Use small movements of the steering controls.
- Be extra cautious with any additional equipment, which can alter the machine's stability.
- Do not mow near verges, ditches, or banks. The machine can suddenly spin around if a wheel goes over the edge of a drop or ditch, or if an edge gives way.
- Do not mow wet grass. It is slippery, and the tires can lose their grip, so that the machine slides.
- Try not to stabilize the machine by putting a foot on the ground.
- When cleaning the chassis, the machine may never be driven near verges or ditches.



6003-004

Mow up and down, not side-to-side

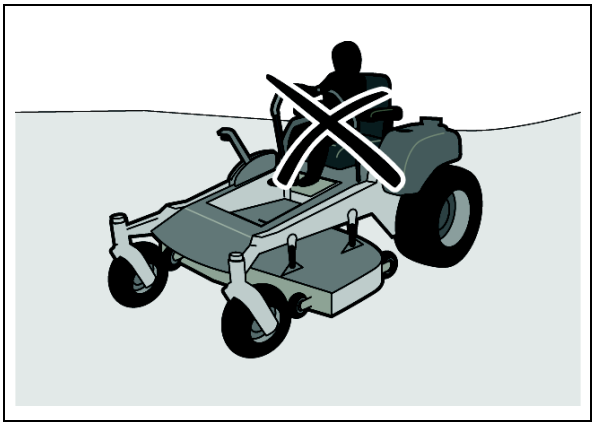


8011-519

Be extra cautious when driving on slopes

Children

- Serious accidents may occur if you fail to be on guard for children in the vicinity of the machine. Children are often attracted to the machine and mowing work. Never assume that children will stay put where you last saw them.
- Keep children away from the mowing area and under close supervision by another adult.
- Keep an eye out and shut off the machine if children enter the work area.
- Before and during a reversing maneuver, look backward and downward for small children.
- Never allow a child to ride with you. They can fall off and injure themselves seriously or prevent risk-free maneuvering of the machine.
- Never allow children to operate the machine.
- Be particularly cautious near corners, bushes, trees, or other objects that block your view.



8011-517

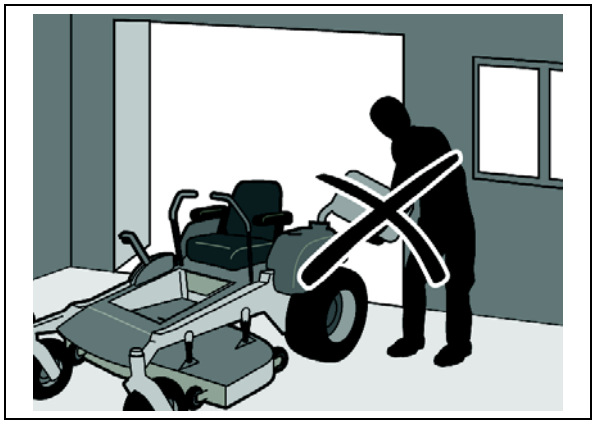
Never allow children to operate the machine

Maintenance

WARNING!

The engine must not be started when the driver's floor plate or any protective plate for the mower deck's drive belt is removed.

- Stop the engine. Prevent the engine from starting by removing the ignition key before making any adjustments or performing maintenance.
- Never fill the fuel tank indoors.
- Fuel and fuel fumes are poisonous and extremely flammable. Be especially cautious when handling fuel, as carelessness can result in personal injury or fire.
- Only store fuel in containers approved for the purpose.
- Never remove the fuel tank cap and never fill the fuel tank while the engine is running.



8011-516

Never fill the fuel tank indoors

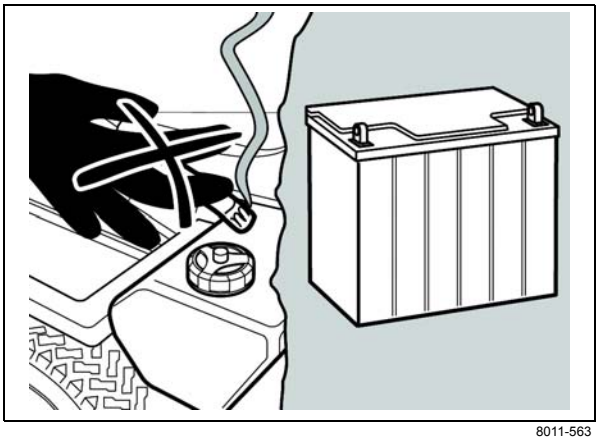
- Allow the engine to cool before refueling. Do not smoke. Do not fill fuel in the vicinity of sparks or open flames.
- If leaks arise in the fuel system, the engine must not be started until the problem has been resolved.
- Store the machine and fuel in such a way that there is no risk of leaking fuel or fuel vapor leading to damages.
- Check the fuel level before each use and leave space for the fuel to expand, because the heat from the engine and the sun may otherwise cause the fuel to expand and overflow.
- Avoid overfilling. If you spill fuel on the machine, wipe up the spill and wait until it has evaporated before starting the engine. If you have spilled fuel on your clothing, change your clothing.
- Allow the machine to cool before taking any actions in the engine compartment.
- Be very careful when handling battery acid. Acid on skin can cause serious corrosive burns. If you spill battery acid on your skin, rinse immediately with water.
- Acid in the eyes can cause blindness, contact a doctor immediately.
- Be careful when servicing the battery. Explosive gases form in the battery. Never perform maintenance on the battery when smoking or near open flames or sparks. The battery can explode and cause serious injury/damage.
- Ensure that nuts and bolts, especially the fastening bolts for the blade attachments, are properly tightened and that the equipment is in good condition.
- Do not modify safety equipment. Check regularly to be sure it works properly. The machine must not be driven with defective or unmounted protective plates, protective cowlings, safety switches, or other protective devices.
- Do not change the settings of governors and avoid running the engine with overly high engine speeds. If you run the engine too fast, you risk damaging the machine components.

WARNING!

The engine, the exhaust system, and the hydraulic system's components become very warm during operation.
Risk for burns if touched.

WARNING!

The battery contains lead and lead compounds, chemicals that are considered to cause cancer, birth defects, and other reproductive system damage. Wash your hands after touching the battery.



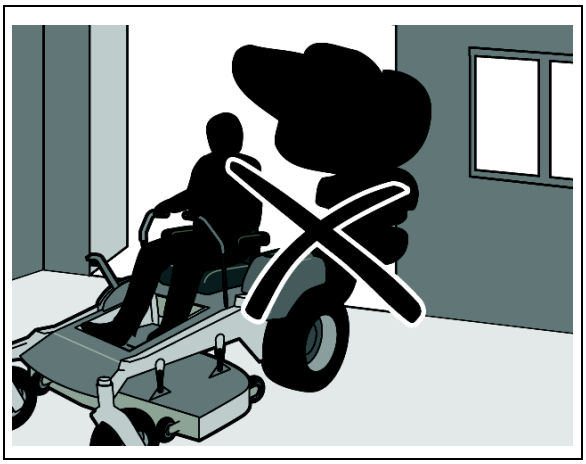
8011-563

Do not smoke when performing maintenance on the battery. The battery can explode and cause serious injury/damage

- Never use the machine indoors or in spaces lacking proper ventilation. The exhaust fumes contain carbon monoxide, an odorless, poisonous, and lethal gas.
- Stop and inspect the equipment if you run over or into anything. If necessary, make repairs before starting.
- Never make adjustments with the engine running.
- The machine is tested and approved only with the equipment originally provided or recommended by the manufacturer.
- The blades are sharp and can cause cuts and gashes. Wrap the blades or use protective gloves when handling them.
- Check the parking brake's functionality regularly. Adjust and service as necessary.
- The mulch deck shall only be used when higher quality mowing is desired in familiar areas.
- Reduce the risk of fire by removing grass, leaves, and other debris that may have accumulated on the machine. Allow the machine to cool before putting it in storage.

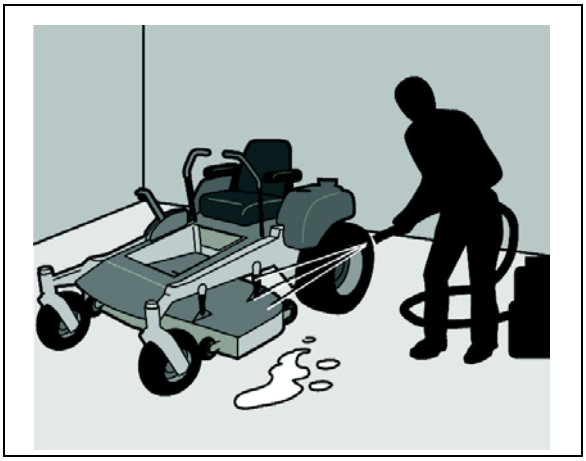
Transport

- The machine is heavy and can cause serious crushing injuries. Be extra cautious when it is loaded on or unloaded from a vehicle or trailer.
- Use an approved trailer to transport the machine. Activate the parking brake, turn off the fuel supply, and fasten the machine with approved fastening devices, such as bands, chains, or ropes, when transporting.
- Check and abide by local traffic regulations before transporting or driving the machine on any road.



8011-515

Never drive the machine in an enclosed space



8011-514

Clean the machine regularly

IMPORTANT INFORMATION

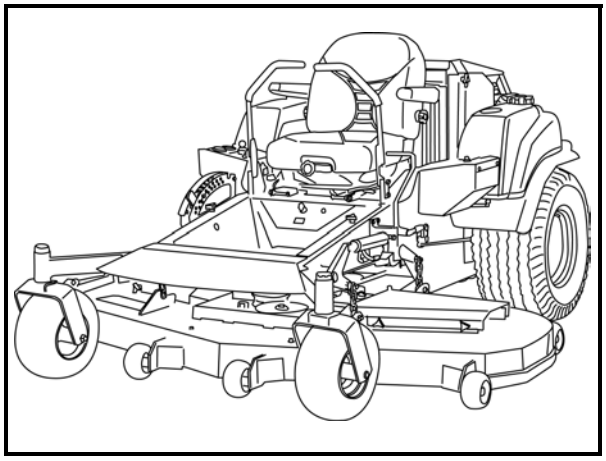
The parking brake is not sufficient to lock the machine in place during transport. Ensure that the machine is well fastened to the transport vehicle. Reverse the machine onto the transport vehicle to avoid tipping it over.

CONTROLS

Presentation

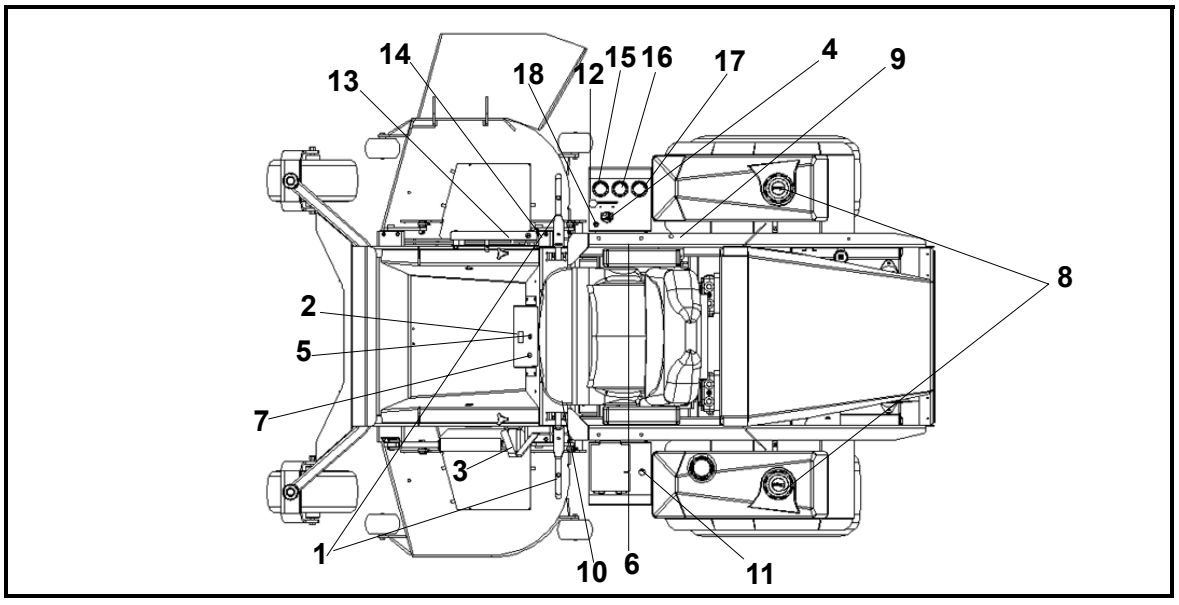
This operator's manual describes the Husqvarna Lever-Steered Rider Mower. The mower is fitted with a liquid cooled, 3 cylinder Daihatsu diesel engine (27 HP) or Daihatsu Turbo diesel engine (34 HP).

Transmission from the engine is made via two belt-driven hydraulic pumps, which in turn drive a hydraulic motor for each drive wheel. Using the left and right steering controls, the flow is regulated and thereby the direction and speed.



BAM-1

Lever-Steered Rider



Component Locations

Component Locations

1. Steering control left & right
2. Hour meter
3. Parking brake
4. Control for engaging the mower deck
5. Ignition
6. Relays
7. Glow plug lamp
8. Fuel tank caps
9. Fuel shut-off
10. Seat adjustment lever
11. 12V DC adapter
12. Throttle- regulates the engine speed
13. Cutting height adjuster
14. Manual deck lift
15. Water temperature gauge
16. Ammeter gauge
17. Oil pressure gauge
18. Hydraulic deck lift switch

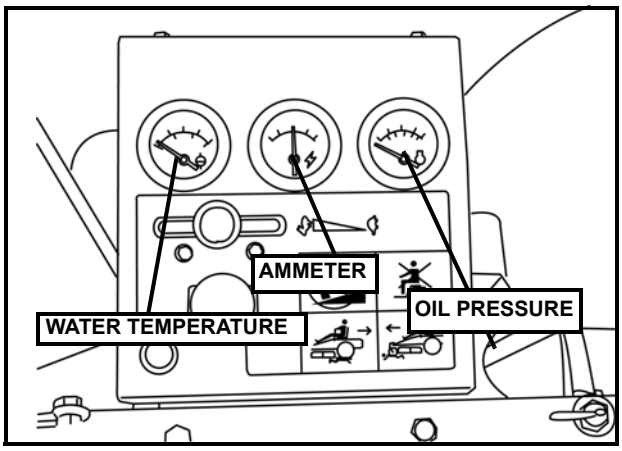
CONTROLS

Gauges

Water temperature gauge- indicates coolant temperature and warns of overheat situation.

Ammeter - indicates amount of electrical flow at the battery. Under normal operating conditions the needle will be slightly on the plus (+) side of the gauge, showing that current is being supplied to the battery. At idle speed, the indicator may be at zero or on the negative (-) side. A continuous negative reading at normal operating speed indicates a malfunction in the charging system that should be checked immediately.

Oil pressure meter - tells what the pressure is in the oil system and warns if pressure is too low for operation.



Gauges BAM-2

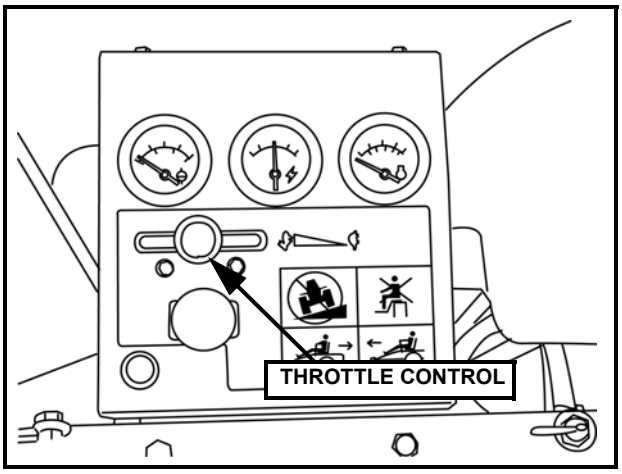
Throttle Control

The throttle control regulates the engine speed.

In order to increase or decrease the engine speed, the control is moved forward or backward respectively.

Avoid idling the engine for long periods.

Use full throttle when mowing.



Throttle control BAM-2

Ignition

The ignition key is placed in the front console and is used to start the machine.

IMPORTANT INFORMATION

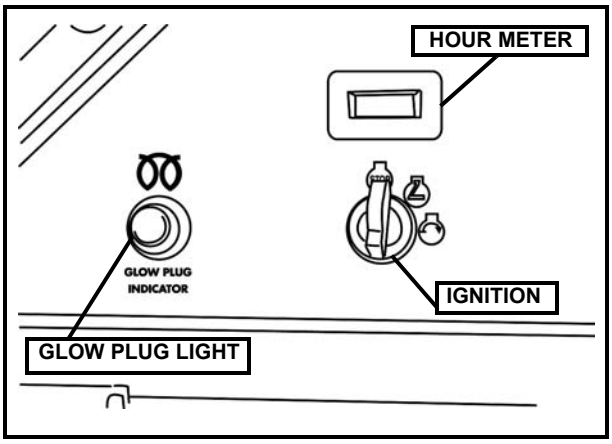
Wait till the glow plug light goes out before turning the engine over. To prolong starter life use short starting cycles, DO NOT exceed 30 secs./min.

Hour Meter

The hour meter displays the total operating time and reminds of service intervals.

Meter will indicate "CHG OIL" for engine oil and "SVC" for general service at preset intervals.

Service alerts will re-set after serveral hours.

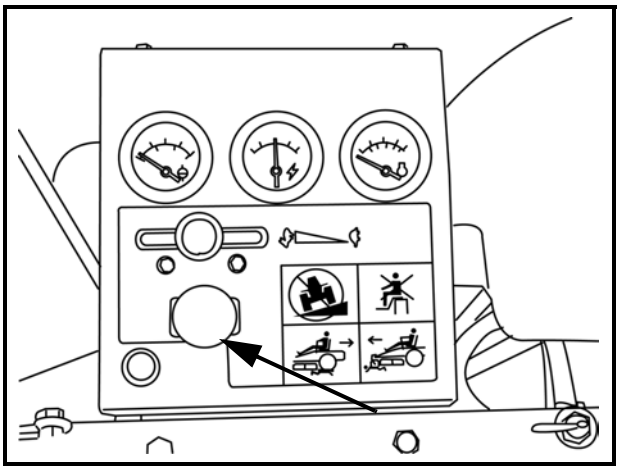


Console BAM-3

Engaging the Mower Deck

In order to engage the mower deck, pull the knob out; the mower deck is disengaged when the knob is depressed.

Deck should be engaged at mid throttle and disengaged at idle speed to prolong clutch life.

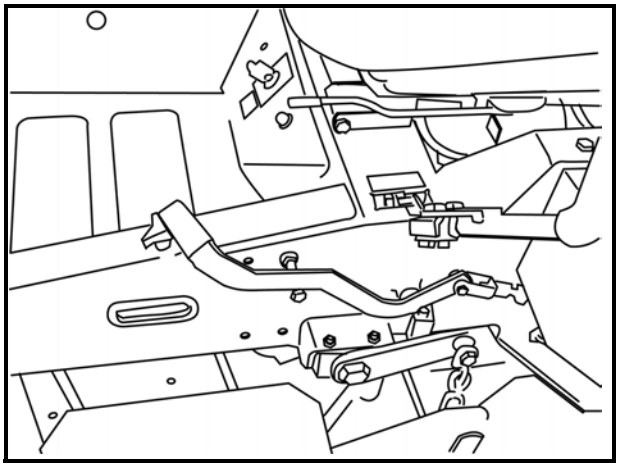


BAM-2

Engaging the mower deck

Parking Brake

The parking brake is found on the left of the machine. Pull the lever back to activate the brake and push forward to release it.



BAM-4

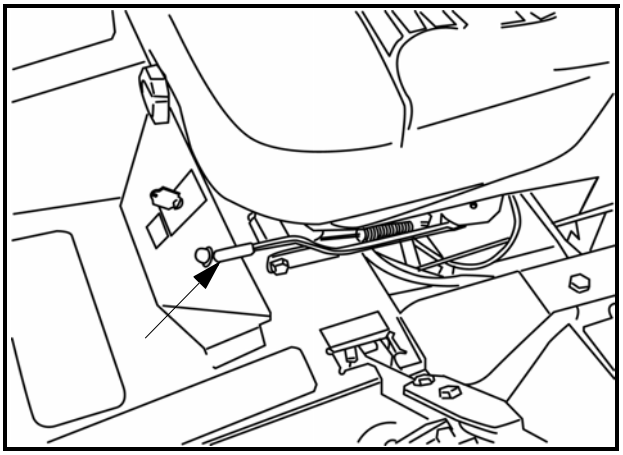
Parking brake not activated

Seat Adjustment

Located on the left side of the seat is the seat adjustment lever. Pull outward to slide the seat either forward or backward.

Suspension resistence (weight) can be adjusted at the front of the seat.

Backrest tilt and lumbar support can also be adjusted using dials on the sides of the seat.



BAM-5

Seat Adjustment Lever & suspension adjustment

Motion Control Levers

The machine's speed and direction are continuously variable using the two motion control levers. The motion control levers can be moved forward or backward from a neutral position. Furthermore, there is a neutral position, which is locked if the motion control levers are moved outward into the neutral slots.

When both controls are in the neutral position (N), the machine stands still.

The motion control levers on each side of the mower control the direction of movement. The left lever controls the flow of oil from the left hydro pump to the left wheel motor. The right lever controls the flow of oil from the right hydro pump to the right wheel motor.

NOTE: To begin motion, the operator must be in the seat and the parking brake disengaged before the motion control levers can be moved from the neutral slots or the engine will shut down.

By moving the levers an equal amount forward or back the machine will move in a straight line in that direction.

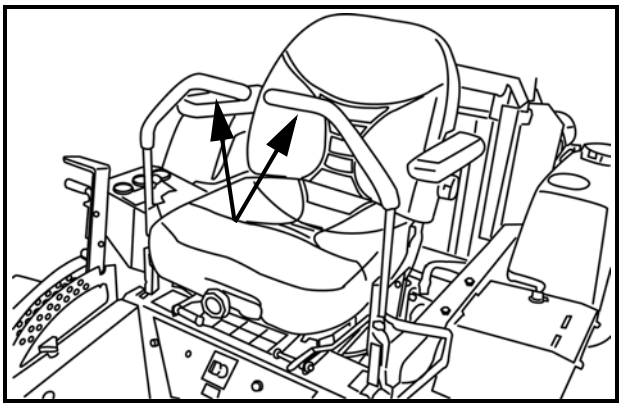
Movement of either lever forward will cause the right or left wheel to rotate in a forward direction. To stop movement pull both levers into the neutral position.

To turn right while moving in a forward direction pull the right lever back toward the neutral position, this will slow the rotation of the right wheel and cause the machine to turn in that direction.

To turn left while moving in a forward direction pull the left lever back towards the neutral position, this will slow the rotation of the left wheel and cause the machine to turn in that direction.

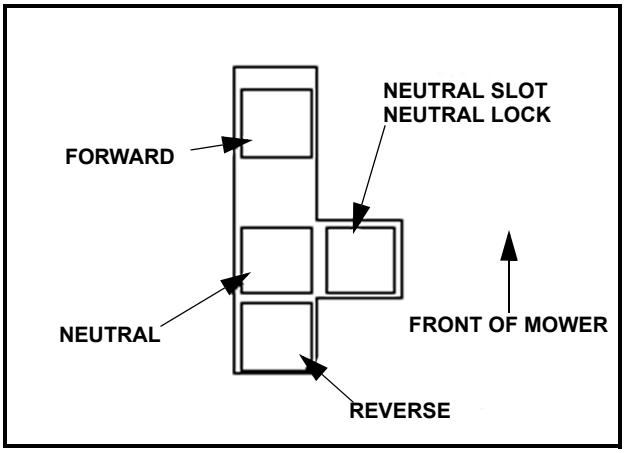
To zero turn pull one lever back beyond neutral while holding the other slightly ahead of neutral.

NOTE: The direction of the zero turn will be determined by which lever is pulled back beyond neutral. Thus left lever back, left zero turn and opposite for right zero turn. **Use extra care when using this maneuver the machine can spin very rapidly if one lever is positioned too far ahead of the other.**



BAM-6

Motion Control Levers

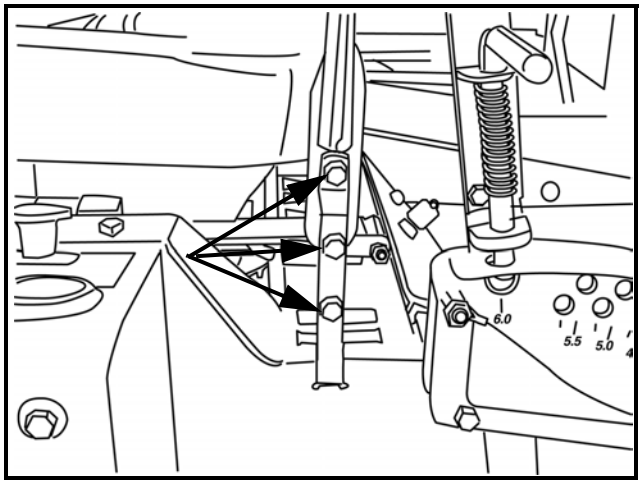


Motion control lever pattern (right side)

WARNING!

The machine can turn very rapidly if one steering control is moved much further forward than the other.

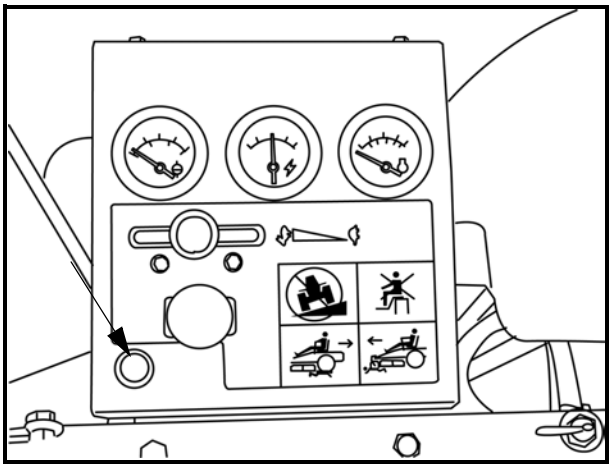
If the steering controls are in uneven positions when standing still, they can be adjusted using the adjustment screws, not the link system, for the controls



Adjusting screws BAM-7

Hydraulic Lift Switch

Used to raise and lower the mower deck hydraulically. Only used on units with power deck lifts. Push switch forward to lower the deck and pull backward to raise the deck.



Hydraulic lift switch BAM-2

Refueling

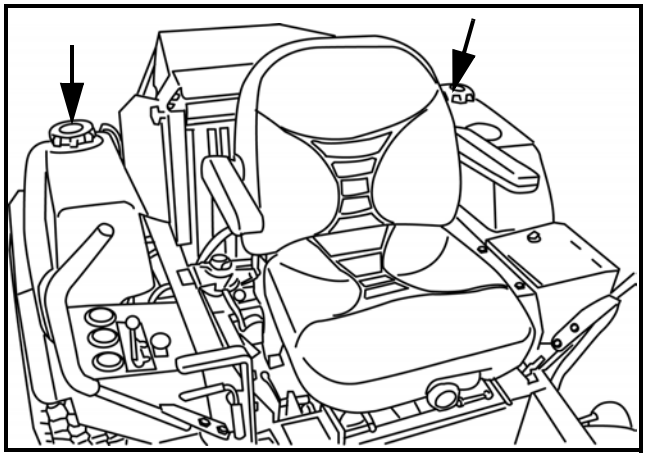
The machine has two fuel tanks, one on each side just behind the seat. The tanks hold 11.4 gallons, 5.7 gallons each.

The engine is run on clean, fresh, diesel fuel with a minumum of 40 cetane.

.

WARNING!

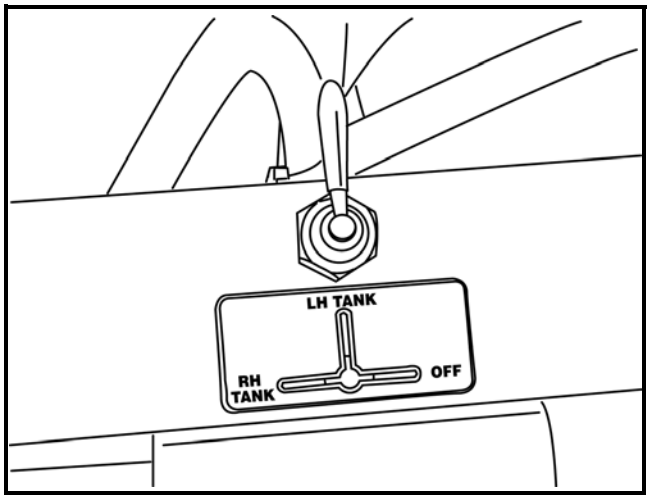
Diesel fuel is highly flammable. Observe caution and fill the tank outdoors (see the safety rules).



Fuel Tanks BAM-8

Fuel Shut-Off

The fuel shut-off is placed to the right side of the seat. The shut-off has three positions; right tank, left tank and off position.



Fuel Shut-Off BAM-9

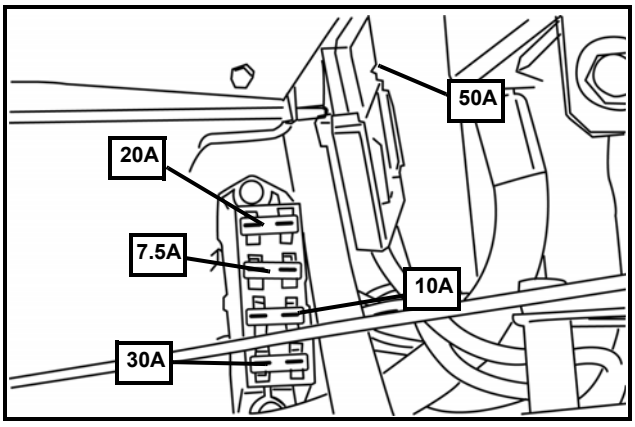
Fuses

The fuses are located in a fuse block to the right of the battery. They are flat pin fuses of the same type used in automobiles.

There are five fuses.

Fuse ratings and functions moving from the top:

- 20A - accesory jack
- 7.5A - sub system
- 10A - PTO/clutch
- 30A - hydrualic deck lift
- 50A - main system fuse (in line)



BAM-10

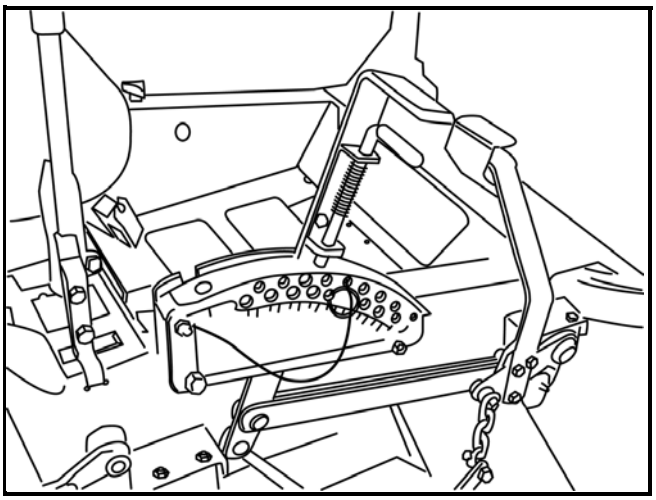
Fuses

Manual Lifting Lever with Foot Assist for the Mower Deck

The lifting lever is used to place the mower deck in the transport position or one of the 17 different cutting height positions.

The cutting height is set by placing a pin in the hole for the desired cutting height and the pin is then locked on the inside (hidden in the illustration) with the supplied cotter pin.

1. Pull the lever backward while pushing on the foot pedal, lifting the deck to the locked position. The deck is then raised.
2. Depress the lock handle, counter hold, and move the lifting lever forward toward the pin to engage the set cutting height. The deck is then lowered.
3. The lifting lever can also be used to temporarily adjust the cutting height, such as when passing a minor bump in the lawn.



BAM-11

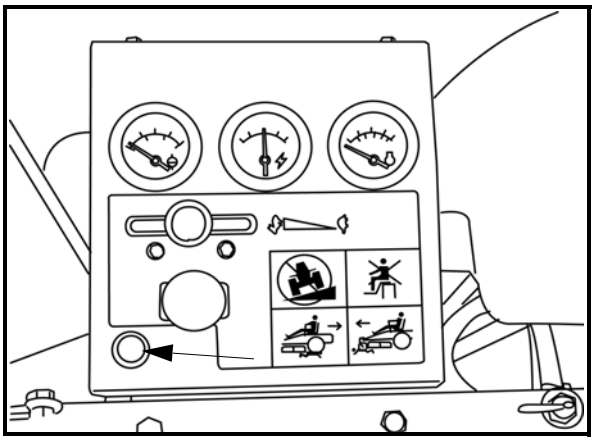
The mower deck's lifting lever and foot pedal

IMPORTANT INFORMATION

In order to obtain an even cutting height it is important that the air pressure in all four tires is the same (16 psi).

Hydraulic Lift for the Mower Deck

1. Place pin in the appropriate hole for desired cutting height, secure with cotter pin.
2. Push switch forward on the console to lower deck to the set cutting height.
3. Pull backwards on the switch on the console to raise the deck for transport.



Hydraulic switch

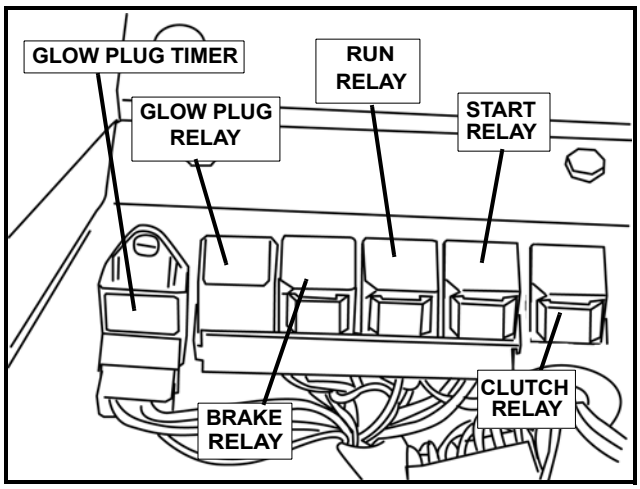
BAM-2

IMPORTANT INFORMATION

Pin must be locked into a hole for transport or mowing.

Relays

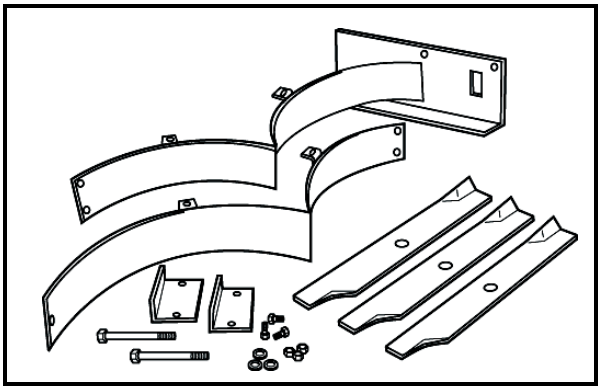
The relays and glow plug timer are located in a holder to the right side of the seat.



Relays

Accessories

For mulching, there is a Mulch Kit attachment available. This is mounted underneath the mower deck and comprised of baffles and mulch blades.



Mulch kit attachment

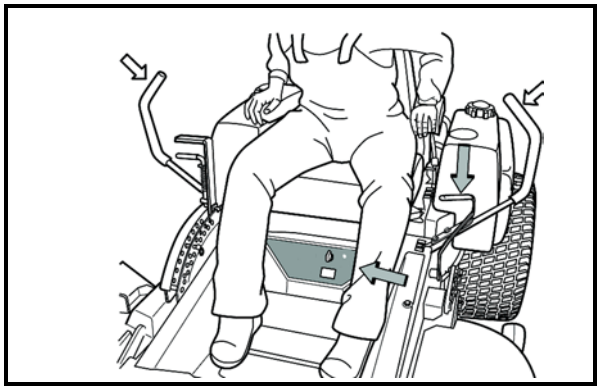
Running

Before Starting

- Read the sections Safety Instructions and Presentation before starting the machine.
- Perform the daily maintenance before starting (see Maintenance Schedule in the Maintenance section).
- Check that there is sufficient fuel in the fuel tanks.
- Adjust the seat to the desired position.

The following conditions must be fulfilled before the engine can be started:

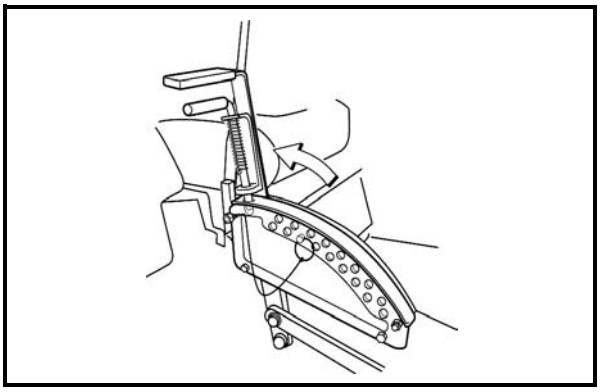
- the driver must be seated on the seat,
- the control for engaging the mower deck must be depressed,
- the parking brake must be on,
- both steering controls must be in the locked (outer) neutral position.



Start conditions

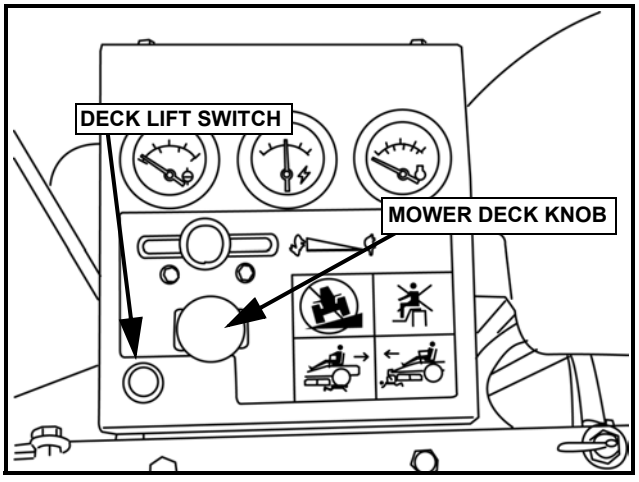
Starting the Engine

1. Sit on the seat.
2. Raise the mower deck by pulling the lifting lever backward to the locked position (transport position) on manual lift units. Activate the parking brake.
3. Mowers with hydraulic lift decks, are raise by pulling back on the lift switch located on the console.
4. Disengage the mower deck by pressing the control knob.



8011-552

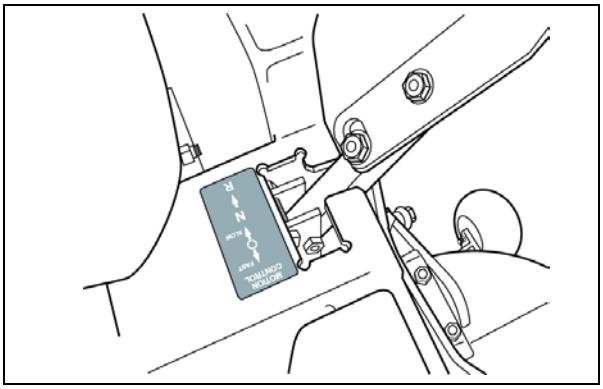
Raise the mower deck - 27.5 HP engine



BAM-2

Depress the control knob for disengaging the mower deck

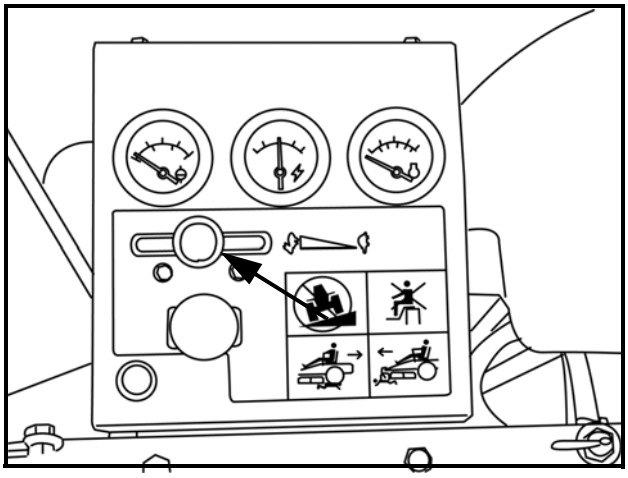
5. Move the steering controls outward to the locked (outer) neutral position.



8011-526

Steering controls in the outward, locked neutral position

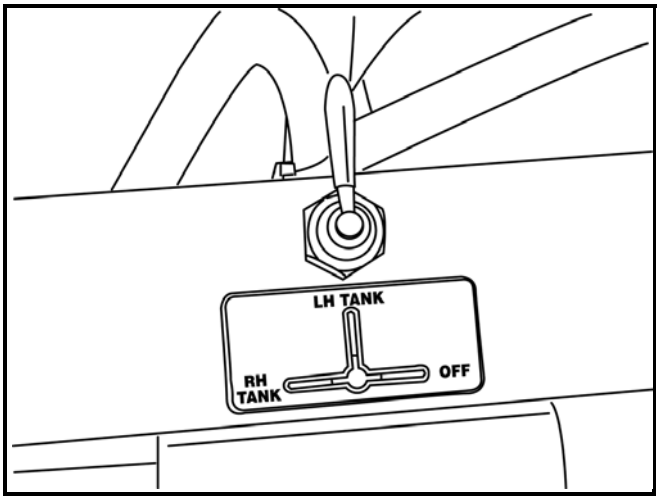
6. Move the throttle to the middle position.



BAM-2

Set the throttle

7. Open the fuel switch for the selected fuel tank.



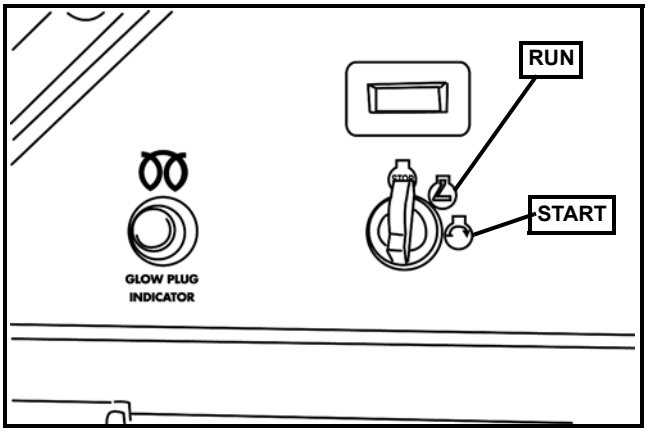
BAM-9

Open the fuel switch

8. Turn the ignition key to the run position to activate the glow plug. Wait till the light goes out, then turn key to start position.

IMPORTANT INFORMATION

Wait till the glow plug light goes out or damage could result to the engine.



BAM-3

Start position

9. When the engine starts, immediately release the ignition key back to the run position.

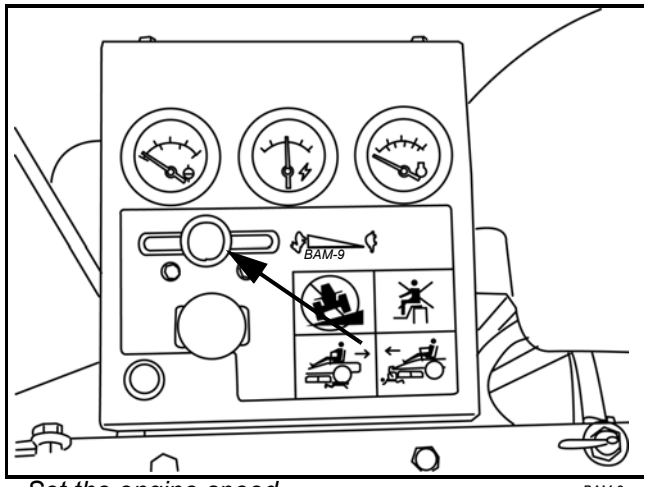
IMPORTANT INFORMATION

To prolong starter life, use short starting cycles, not to exceed 30 secs./min. Extended cranking can damage starter motor.

10. Set the desired engine speed with the throttle.
    Allow the engine to run at a moderate speed, ”half throttle”, for 1 minute before increasing the engine speed.
    Use full throttle when mowing.

WARNING!

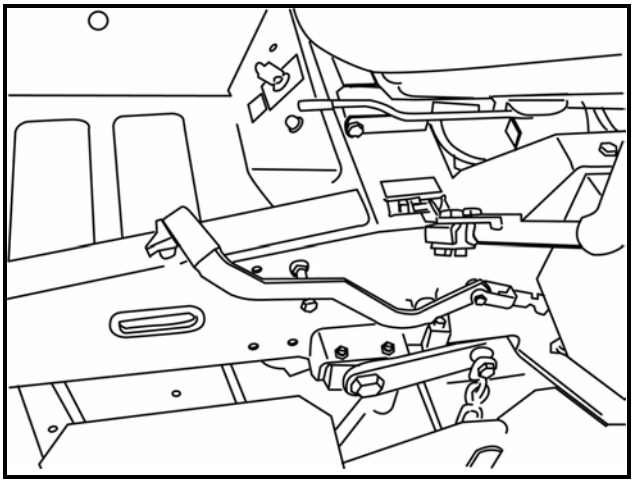
Never run the engine indoors, in enclosed or poorly ventilated spaces. Engine exhaust fumes contain poisonous carbon monoxide.



Set the engine speed BAM-2

Running

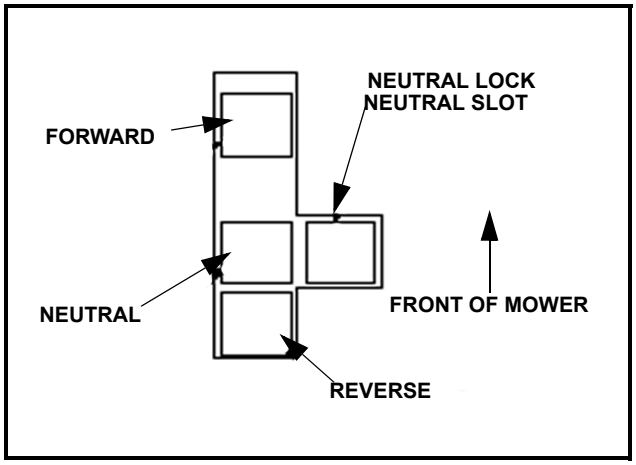
1. Release the parking brake by moving the lever forward.



BAM-4

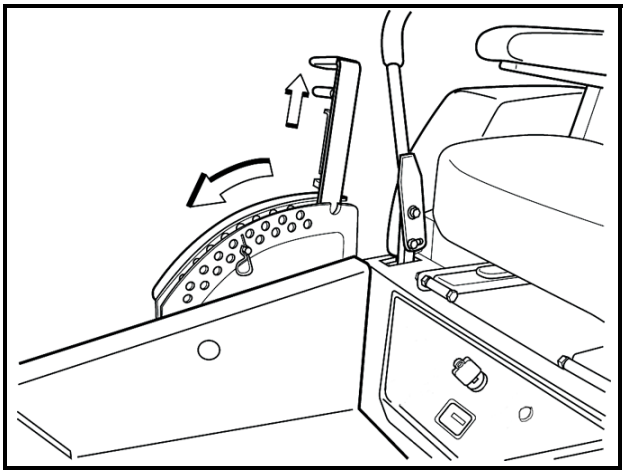
Released parking brake

2. Move the motion control levers out of the neutral slot/lock position (N).



Motion control lever pattern (right side)

3. Select the cutting height by placing the pin in one of the holes. Lock the pin on the inside with the cotter pin.
4. Press in the stop handle, counter hold, and carefully move the lifting lever forward from the transport position toward the pin on manual units.
5. On power units push the hydraulic lift switch forward to lower the deck to the selected pin position.



8011-561

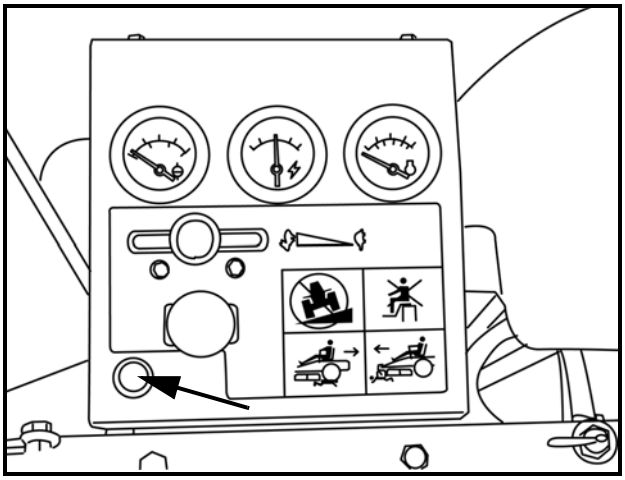
Cutting height selection (27.5 HP)

IMPORTANT INFORMATION

The mower deck's anti-scalp rollers should be evenly adjusted. See Maintenance section

WARNING!

Make sure that no one is near the machine when engaging the mower deck.



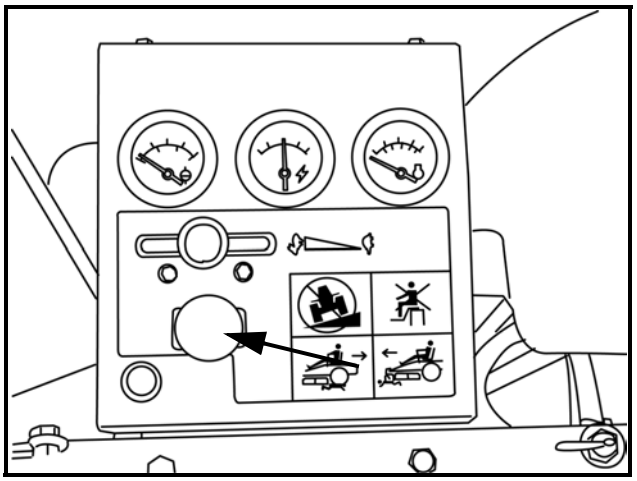
BAM-2

Hydraulic switch

6. Engage the mower deck by pulling out the control knob.
7. The machine's speed and direction are continuously variable using the two motion control levers. The motion control levers can be moved forward or backward about a neutral position. Furthermore, there is a neutral position, which is locked if the motion control levers are moved outward into the neutral slots.

   When both controls are in the neutral position (N), the machine stands still.

   The motion control levers on each side of the mower control the direction of movement. The left lever controls the flow of oil from the left hydro pump to the left wheel motor. The right lever controls the flow of oil from the right hydro pump to the right wheel motor.



BAM-2

Engaging the mower deck

NOTE: To begin motion, the operator must be in the seat and the parking brake disengaged

before the motion control levers can be moved from the neutral slots or the engine will kill.

By moving the levers an equal amount forward or back the machine will move in a straight line in that direction.

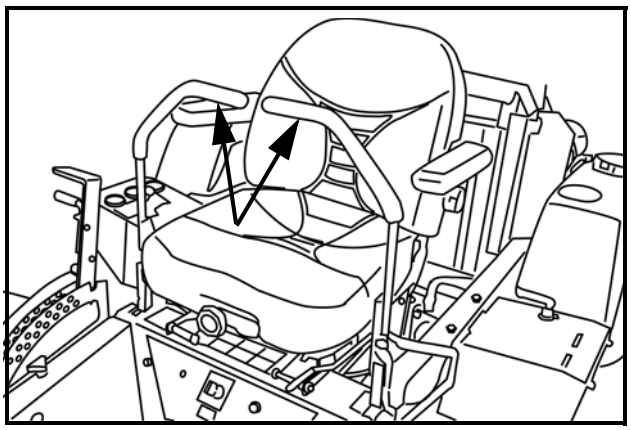
Movement of either lever forward will cause the right or left wheel to rotate in a forward direction. To stop movement pull both levers into the neutral position.

To turn right while moving in a forward direction pull the right lever back toward the neutral position, this will slow the rotation of the right wheel and cause the machine to turn in that direction.

To turn left while moving in a forward direction pull the left lever back towards the neutral position, this will slow the rotation of the left wheel and cause the machine to turn in that direction.

To zero turn pull one lever back beyond neutral while holding the other slightly ahead of neutral.

NOTE: The direction of the zero turn will be determined by which lever is pulled back beyond neutral. Thus left lever back, left zero turn and opposite for right zero turn. **Use extra care when using this maneuver the machine can spin very rapidly if one lever is positioned too far ahead of the other.**



Motion Control Levers BAM-6

WARNING!

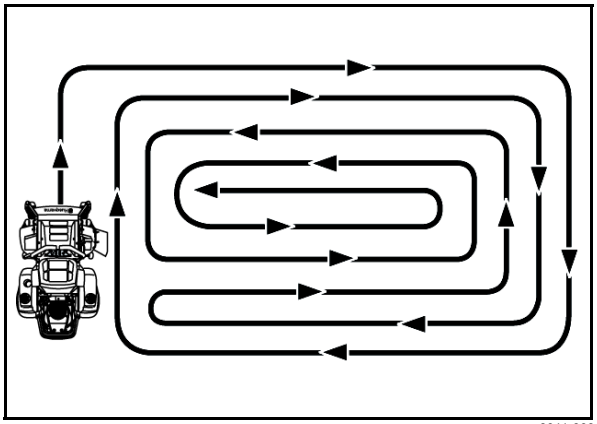
The machine can turn very rapidly if one steering control is moved much further forward than the other.

Mowing Tips

WARNING!

Clear the lawn of stones and other objects that can be thrown out by the blades.

- Locate and mark rocks and other fixed objects in order to avoid collisions.
- Begin with a high cutting height and reduce it until the desired mowing result is attained.
- The mowing result will be best with a high engine speed (the blades rotate rapidly) and low speed (the rider moves slowly). If the grass is not too long and



8011-603

Mowing patterns

dense, the driving speed can be increased without noticeably depreciating the mowing result.

- The finest lawns are obtained by mowing often. The mowing becomes more even and the grass clippings more evenly distributed over the mown area. The total time taken is not increased as a higher driving speed can be used without poorer mowing results.
- Avoid mowing wet lawns. The mowing result is poorer because the wheels sink into the soft lawn, clumps build, and the grass clippings attach under the deck.
- Hose beneath the mower deck with water after each use. When cleaning, the mower deck should be raised into the transport position.
- When the mulch deck is used, it is extremely important that the mowing interval is not too long.

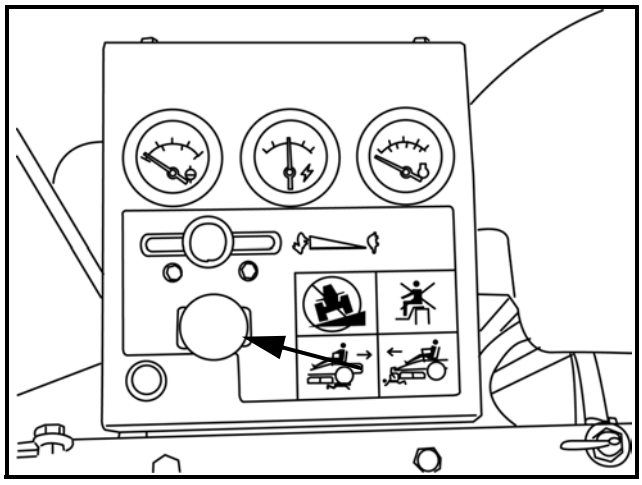
WARNING!

Never drive the machine on terrain that slopes more than 10°.
Mow slopes up and down, never side-to-side. Avoid sudden directional changes.

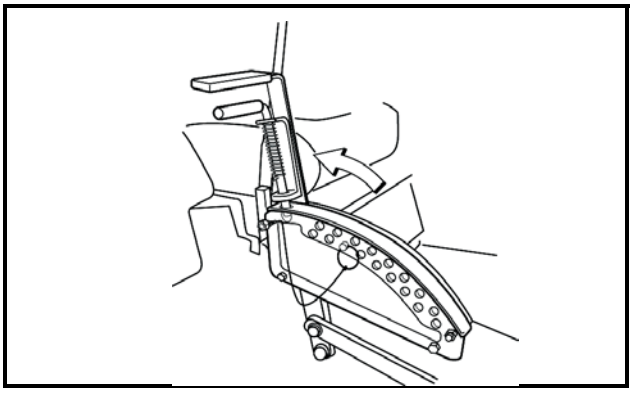
Stopping the Engine

Allow the engine to idle a minute in order to attain normal operating temperature before stopping it if it has been worked hard. Avoid idling the engine for long periods.

1. Disengage the mower deck by depressing the control.
2. On manual decks raise the mower deck by pulling the lifting lever backward to the transport position.
3. On power decks raise the deck by pulling back the hydraulic switch on the console.
4. Move the throttle to the minimum position (tortoise symbol). Turn the ignition key to the stop position.
5. Move the steering controls outward.
6. When the mower is standing still, activate the parking brake by pulling the lever back.



Disengage the mower deck BAM-2



8011-552

Raise the mower deck with the lifting lever on manual decks

Moving by Hand

In order for the machine to be moved with the engine turned off, the system relief valve on both hydraulic pumps must be opened counter clockwise 1/4-1/2 turn.

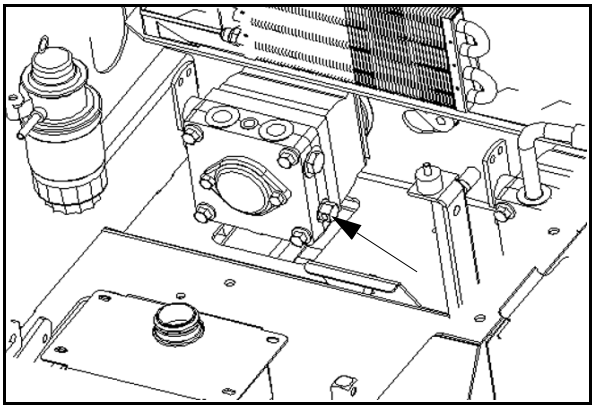
WARNING!

Make no adjustments without:

- the engine stopped,

- the ignition key removed,

- the parking brake activated.



System relief valve on the hydraulic pump

Maintenance

Maintenance Schedule

The following is a list of maintenance procedures that must be performed on the machine. For those points not described in this manual, visit an authorized service workshop. An annual service carried out by an authorized service workshop is recommended in order to maintain your machine in the best possible condition and to ensure safe operation.

Maintenance	Daily maintenance		Weekly maintenance	At least once each year	Maintenance interval in hours			
	Before	After			25	50	100	300
Check for fuel and oil leakages	*							
Check the parking brake	☛							
Check the engine's oil level (every refueling)	☛							
Check the safety system	☛							
Check/clean the radiator debris guard		☛						
Check the mower deck		☛						
Check fastenings (screws, nuts, etc.)		☛						
Start the engine and blades, listen for unusual sounds		☛						
Clean under the mower deck		☛						
Check the hydraulic system's oil level					☛			
Check the condition of belts, belt pulleys, etc.		☛						
Check for damage		☛						
Check the tire pressures					☛			
Thoroughly clean around the engine		☛						
Thoroughly clean around the hydraulic system		☛						
Clean around belts, belt pulleys, etc.		☛						
Lubricate the belt adjuster, mower deck					☛			
Lubricate the belt adjuster, hydraulic pumps					☛			
Lubricate the belt adjuster, mule drive					☛			
Lubricate all cables			☛					
Lubricate the driver's seat mechanism			☛					
Lubricate the throttle			☛					
Lubricate the front wheel mounts (every 200 hours)							☛	
Lubricate the front wheel bearings						☛		

MAINTENANCE

Maintenance	Daily maintenance		Weekly maintenance	At least once each year	Maintenance interval in hours				
	Before	After			25	50	100	150	300
Lubricate the steering control shafts						☛			
Lubricate the mower deck's struts						☛			
Lubricate the mower deck's cutting height adjuster						☛			
Check/adjust the cutting height				☛					
Change inner (safety) air filter element									*
Clean the air cleaner's filter cartridge [2] (paper filter)				☛		☛			
Change the engine oil [1]				☛				*	
Change the hydraulic oil filter (every 300 hours)				☛					☛
Replace the engine oil filter [1] (every 300 hours)				☛					*
Replace the fuel filter (800 hours)									
Clean the cooling fins		*		☛			☛		
Check the play in the engine valves [4]				☛					☛
Replace the air filter (paper filter) [2]				☛					
Perform the 300-hour service [4]				☛					☛
Check/adjust the parking brake				☛		☛			
Check coolant level at overflow reservoir	*								
Flush cooling system				☛					
Check hydraulic deck lift power unit					*				

[1] First change after 50 hours. When operating with a heavy load or at high ambient temperatures, replace every 50 hours. [2] In dusty conditions, cleaning and replacement are required more often. [3] For daily use, the machine should be lubricated twice weekly. [4] Performed by authorized service center.

WARNING!

No adjustments or maintenance to be carried out unless:

- **The engine is stopped.**
- **The ignition key has been removed.**
- **The parking brake is on.**

Checking the Safety System

The machine is equipped with a safety system that prevents starting or driving under the following conditions.

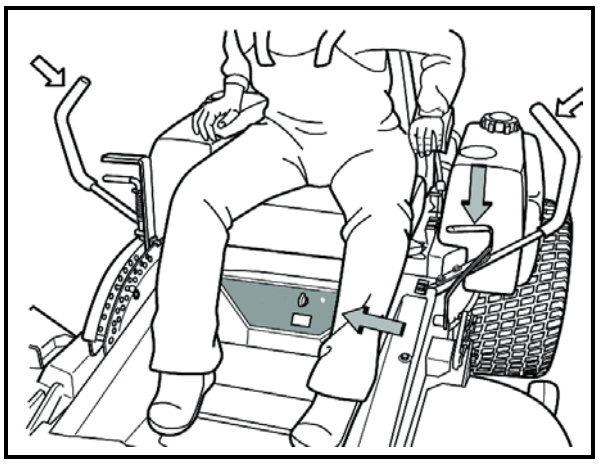
The engine can only be started when:

1. The mower deck is disengaged.
2. The motion control levers are in the outer, locked neutral position.
3. The driver is sitting in the driver's seat.
4. The parking brake is on.

Make daily inspections to ensure that the safety system works by attempting to start the engine when one of the conditions is not met. Change the conditions and try again.
If the machine starts when one of these conditions is not met, turn the machine off and repair the safety system before using the machine again.

Check that the engine stops if one, after having released the parking brake, temporarily stands from the driver's seat (whether the mower deck is engaged or not).

Check that the engine stops if the mower deck is engaged and one temporarily stands up.



8011-527

Conditions for starting

IMPORTANT INFORMATION

In order to be able to drive, the driver must sit in the seat and release the parking brake before the steering controls can be moved into the neutral position, otherwise the engine will stop.

Mower Deck Leveling

Position the mower on a hard level surface.

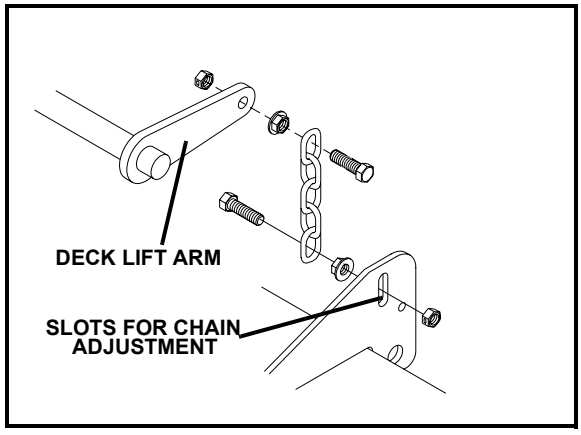
Check the tire pressure in all four tires. Inflation should be 16 psi.

Set anti-scalp rollers at all four corners in top hole

Set 3 1/2" blocks under the anti-scalp rollers (cutting edge of blade should be at 4 1/4".

Position stop in 4 1/4" hole and lower lever onto pin.

Adjust lower end of all four chains in slots on deck weldment so they are just tight.



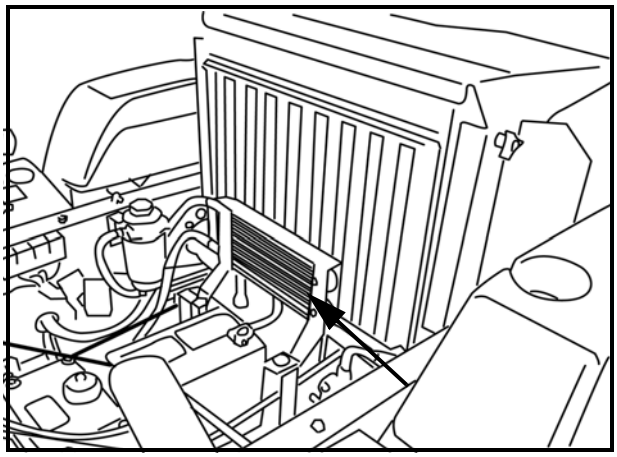
Mower deck leveling

Checking the Engine's Cooling Air Intake

Check that the engine’s cooling air intake is free from leaves, grass, and dirt.
If the cooling air intake is clogged, engine cooling deteriorates, which can lead to engine damage.

The radiator screen can be removed and cleaned

.



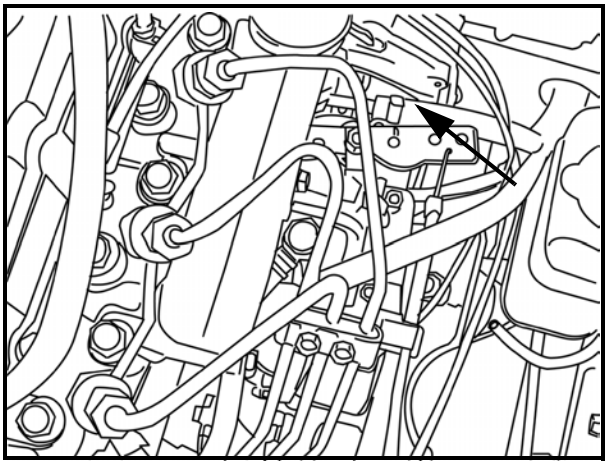
BAM-13

Check and clean the cooling air intake

Checking and Adjusting the Throttle Cable

Check that the engine responds to throttle increases and that a proper engine speed is attained at full throttle.
If doubts arise, contact the service workshop.
If adjustments are necessary, they can be made as follows for the cable:

1. Loosen the clamping screw for the cable’s outer casing and move the throttle to the full throttle position.
2. Check that the throttle cable is mounted in the correct hole in the lever, see illustration.
3. Push the throttle cable’s outer casing as far as possible and tighten the clamping screw.



Adjusting the throttle cable

BAM-14

Clutch Service and Maintenance

The clutch has an adjustable air gap that should not require adjustment for the life of the machine. Refer to the manufacture’s specification sheet included with the mower.

Replacing the Air Filter

If the engine seems weak or runs unevenly and the dust load indicator has turned red the air filter may be clogged. If run with a clogged air filter, disruption of operation can occur. Cleaning/replacing the air filter is carried out as follows

Only do so when the dust indicator is red.:

WARNING!

Allow the exhaust system to cool before performing service. Risk for burns.

1. Unfasten the two plastic clamps on the sides of the air filter cover. Remove the air filter cover.
2. Remove the paper filter. Lightly brush or use mild air pressure to clean

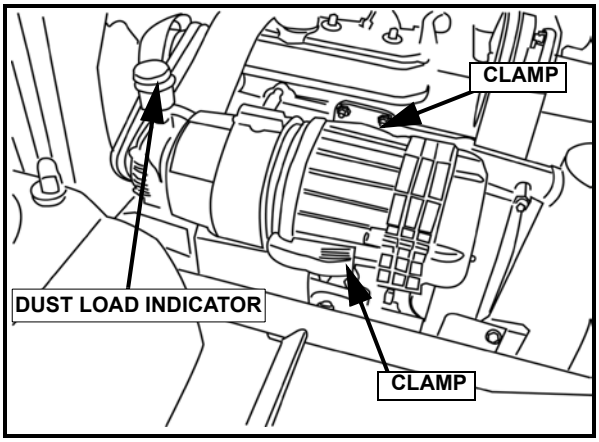
IMPORTANT INFORMATION

Do not use compressed air to clean the air filter.
Do not wash the paper filter.
Do not oil the paper filter. Do not tap filter to clean this could cause damage to the sealing.

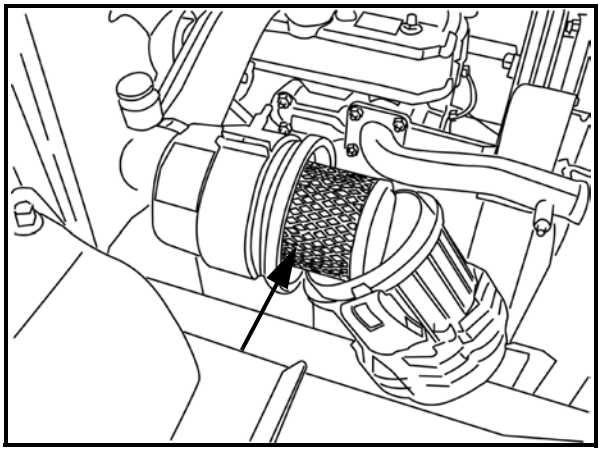
3. Only remove and replace safety element after the paper filter has been replaced 3 or 4 times.
4. Refit the air filter as follows:

   Check that the seal on the bottom of the paper filter is whole.

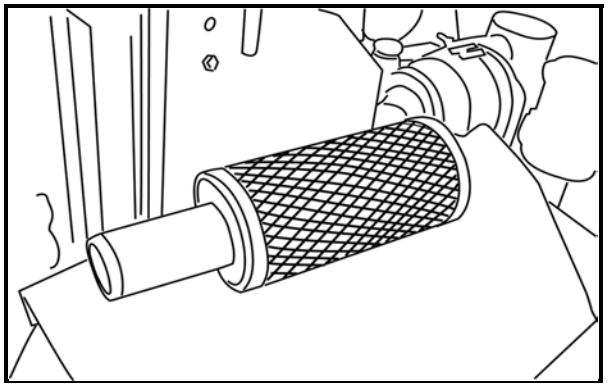
   Mount the safety element in the air filter housing.
5. Place the paper filter over the safety element.
6. Replace the cover over the air filter housing. Fasten the two plastic clamps making sure the cover is snapped into position.
7. Push top of dust load indicator to reset it.



Remove the air filter cover BAM-15



Paper filter BAM-16



Safety element BAM-17

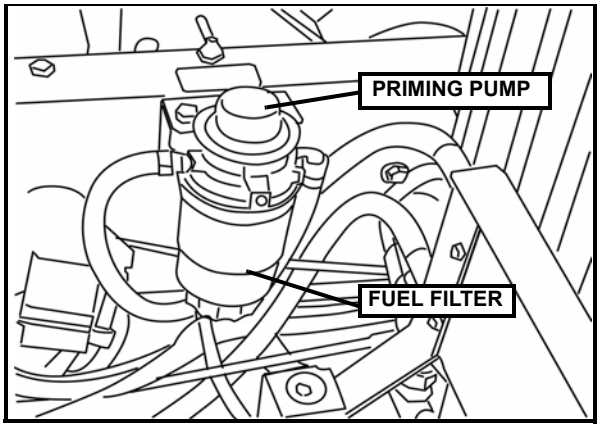
Replacing the Fuel Filter

The fuel filter is located with the priming pump. Replace the fuel filter every 800 hours (once per season) or more regularly if it becomes clogged.

Replace the filter as follows:

Unscrew fuel filter from pump and replace.

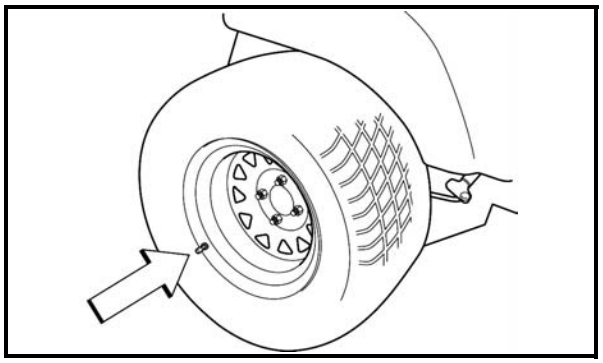
Every 50 hours check for water in the fuel filter. Empty if necessary. Refer to the engine manual.



Fuel filter and fuel pump BAM-18

Checking Tire Pressures

All four tires shall have a pressure of 16 PSI.



8011-564

Tire pressures

Check and Filling Coolant System

WARNING!

ALWAYS make sure the engine is stopped and cool before removing radiator pressure cap. To prevent scalding by hot fluid, NEVER remove the radiator cap while engine is hot

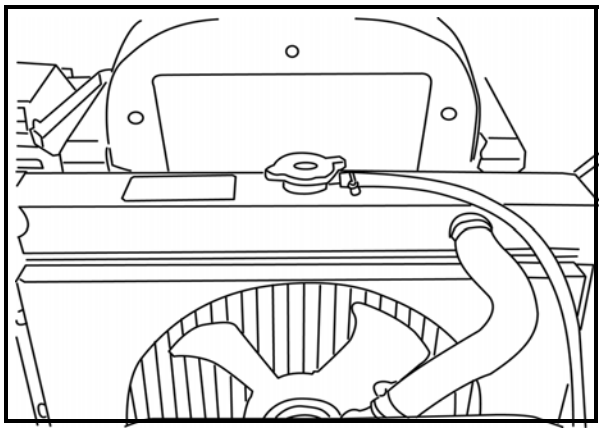
NOTE: Failure to follow the recommended procedure for filling the cooling system will cause engine overheating and possible engine failure.

ALWAYS check coolant level at the overflow reservoir. The correct level of coolant in the over flow tank does **NOT** assure the radiator is full.

It is extremely important that when antifreeze is used, that it be mixed with water in a separate container before adding. **NEVER** add straight antifreeze to the radiator. Recommended mix is 50/50 lowtox phosphate-free antifreeze with tap water.

Refer to engine operator's manual.

The radiator for this cooling system is provided with two drain valves; one at each end of the lower tank. When draining the



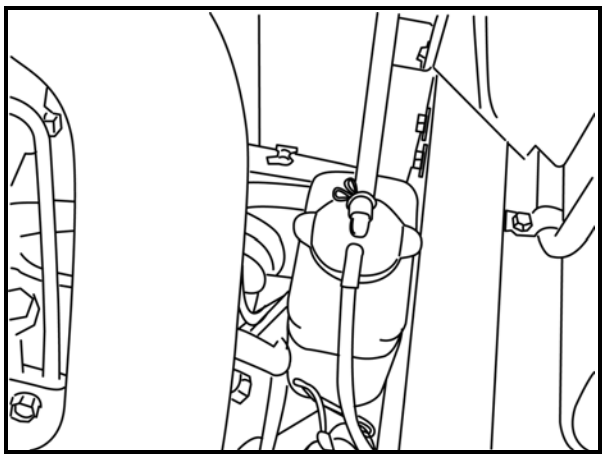
Radiator BAM-19

system, it is necessary to open both these valves to drain the radiator completely.

When refilling the system, it is important that all trapped air be purged. The following procedure will help to insure this:

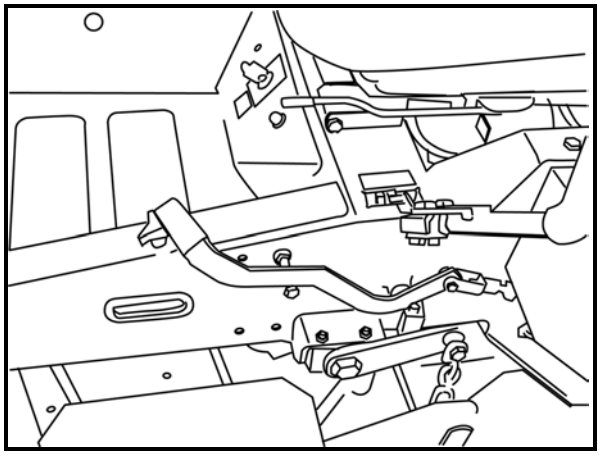
1. Make sure the engine is level. Fill the overflow reservoir up to the MAX mark with coolant mixture.
2. Slowly fill the radiator to the bottom of the filler neck with coolant mixture.
3. With radiator cap off, start the engine and let it warm up (no-load). Then, if necessary, add more coolant mixture to bring the level back up to the bottom of the filler neck.
4. Reinstall the radiator cap and run the engine a short time with the system sealed while watching the temperature gauge. If the temperature gauge goes past 230 degrees and does not drop back to approximately 190 degrees, indicating the thermostat has opened, allow the engine to cool down, check for leaks and repeat the procedure.

This is a sealed system. If it becomes necessary to add coolant mixture at a later date, check for leaks and if the overflow reservoir has not been drained completely, add coolant mixture to the reservoir only. This will help prevent air pockets in the radiator top tank and lessen the chance of introducing contaminates to the system.



BAM-20

Overflow bottle



BAM-4

Parking brake in the disengaged position

Checking the Parking Brake

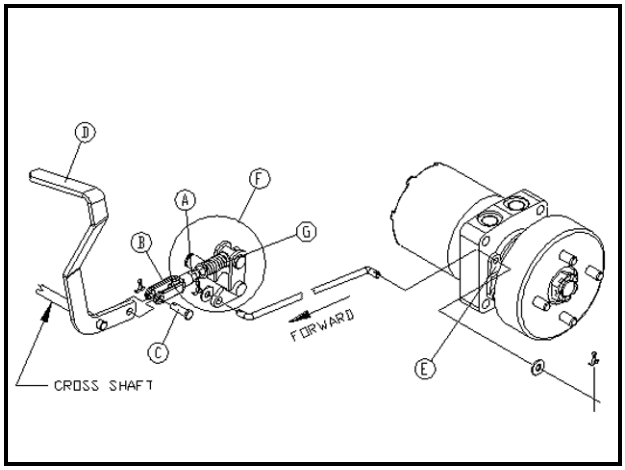
Visually check that no damage is found on the lever, links, or switch belonging to the parking brake. Perform a test drive and check that there is a braking effect.

To adjust the parking brake:

1. Set brake lever (D) fully forward against stop.

NOTE: Brake cross shaft **MUST** be properly lubricated and both cross shaft and over-center assemblies (F) **MUST** rotate freely.

2. Loosen jam nut (A) at rear of clevis (B) and remove clevis pin (C) both sides of mower.
3. Rotate over-center assembly (F) in correct direction (clockwise on left



Parking brake linkage.

counter-clockwise on right) to pull brake actuating arm (E) forward until firm contact between brake shoes and drum can be felt. Hold in this position.

4. Rotate clevis until clevis pin can just be inserted thru clevis and brake lever with pin resting against rear of the hole in brake lever.
5. Remove clevis pin and rotate clevis two (2) full turns toward rear to allow correct clearance between brake shoes and drum.
6. Temporarily reinstall clevis pin (**do not** install cotter pin) to keep clevis from turning and tighten jam nut.
7. Remove pin and repeat above procedure on opposite side.
8. Reinstall clevis pins and secure with new cotter pins.
9. Set brake lever rearward to fully engaged position.
10. Adjust spring (G) to correct tension by turning rear jam nut until spring measures 1 1/8”.

Checking the Blades

In order to attain the best mowing effect, it is important that the blades are well sharpened and not damaged.

Bent or cracked blades or blades with large nicks in shall be replaced.

Check the blade mounts.

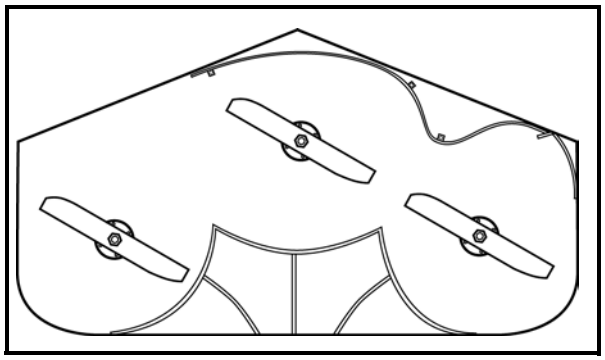
IMPORTANT INFORMATION

The replacement or sharpening of blades should be carried out by an authorized service center.

Blades should be inspected if they have experienced hard impacts such as stumps, curbs or other obstacles. Let your service center decide whether the blades can be repaired/ground or must be replaced.

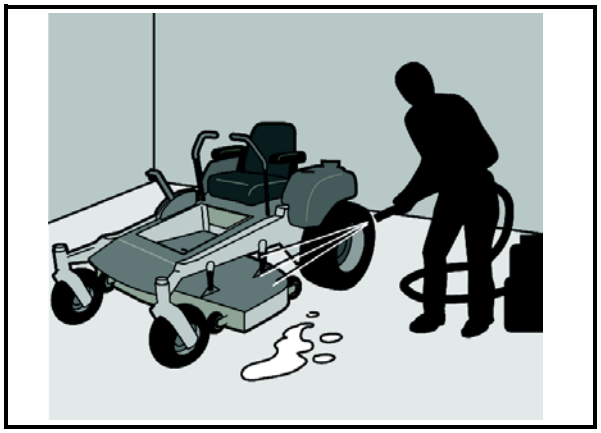
Cleaning and Washing

Regular cleaning and washing, especially under the mower deck, will increase the machine’s life span. Make it a habit to clean the machine directly after use, before the dirt sticks.



8011-604

Check the blades



8011-514

Cleaning

Checking the Hydraulic System

Total System Capacity.....1.125 gal.

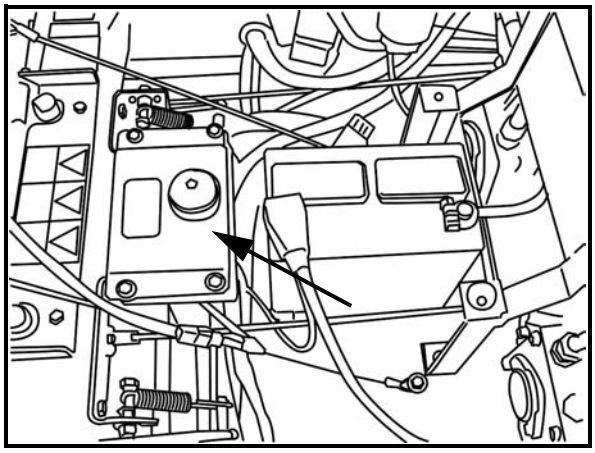
To check the hydraulic fluid level, locate the hydraulic reservoir under the seat. Remove cap and check level. Fill to 1/4” from top of tank.

WARNING!

If a leak is suspected, use a piece of cardboard or wood, NOT your hands, to check for leaks.

Escaping hydraulic oil under pressure can have sufficient force to penetrate the skin, causing serious injury.

If injured by escaping fluid, see a doctor at once. Serious infection or reaction can develop if proper medical treatment is not administered immediately.



BAM-21

Hydraulic reservoir

Checking Battery

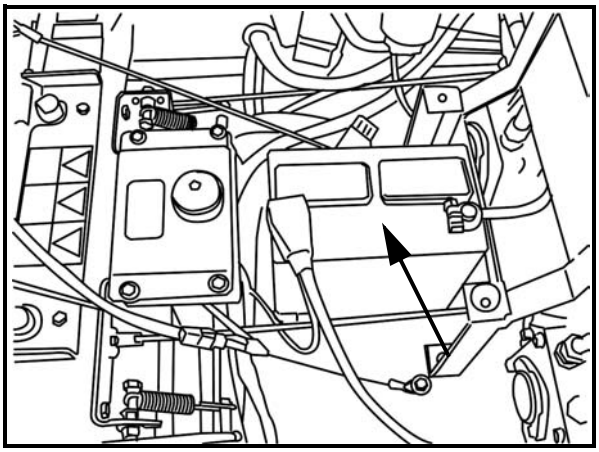
The factory installed battery is “Low Maintenance”. Add liquid only as needed.

WARNING!

UNTRAINED/UNAUTHORIZED persons should NEVER attempt to service or recharge the battery in this unit.

Battery electrolyte is an acidic solution and should be handled with care. If electrolyte is splashed on any art of the body, immediately flush the exposed area with liberal amounts of water and obtain medical aid immediately.

NOTE: Keep top of battery clean and free of corrosion by washing with a solution of baking soda and water OR ammonia and water. Rinse with clean water. Batteries with heavy corrosion should be removed and cleaned with solution. Battery cable should be disconnected before using a “Fast Charger”.



Battery

BAM-21

WARNING!

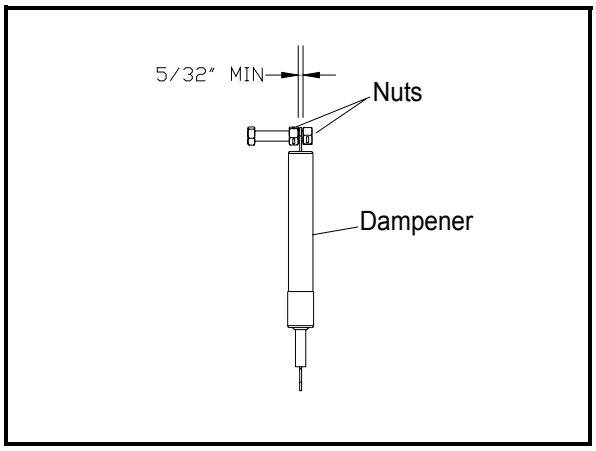
DO NOT allow flames or sparks near a battery when connecting for jump starting or charging.

Hydrogen gas is produced during the charging process and can be explosive. Provide adequate ventilation to prevent possible explosion.

Dampener Mounting

Dampeners must be free to pivot.

Distance between nuts (5/32” minimum) must be maintained so the dampener can pivot freely, both ends. See illustration.



Dampener Mounting

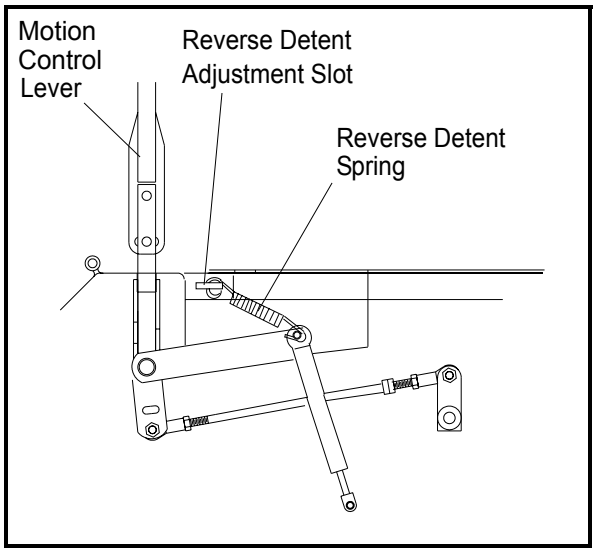
Reverse Detent Adjustment

Stop engine and remove key.

Pull the motion control lever back to the reverse position and release the lever. When the lever stops it should be in line with the neutral slot, so you can move the lever into neutral slot with out hitting the side of the console frame.

If adjustment is required put the seat in the rear most position on the slide, tilt the seat forward, remove the seat rod from seat frame and fold seat over forward onto the frame.

On the back of the console where the spring is fastened, loosen the 3/8” nut and bolt enough to allow the bolt to slide in the slot. See illustration.



Reverse Detent Adjustment

Motion Control Linkage Adjustment

This adjustment must be made with the rear wheels rotating. Raise the rear of the machine and block it up so the wheels are free to rotate.

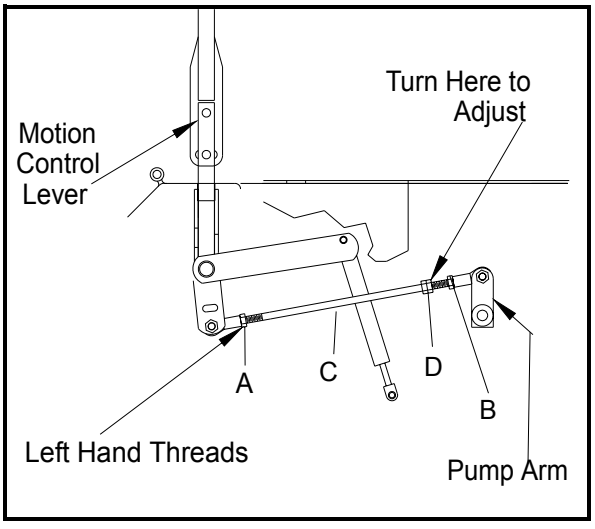
CAUTION!
Keep hands, feet and clothing away from rotating tires.

Tilt seat forward and remove the seat rod so the seat may rotate forward onto the frame.

Place a 2 x 4 board between the foot plate and the center of the seat to engage the seat safety switch.

Loosen the nuts (A & B) directly behind each ball joint on linkages (C). See illustration.

Start the engine. The park brake must be engaged and the motion control levers in the neutral slots to start the engine. Run the engine approximately half throttle. Release park brake to allow the wheels to rotate.



Motion Control Linkage Adjustment

Begin with either side and put the motion control lever into the neutral position. Adjust the motion control linkage by rotating the double nuts (D) in the proper direction until the wheel stops rotating. See illustration. Move the motion control lever forward then into the neutral position and place it into the neutral slot. The wheel must be stopped completely at this point. Now do the same in reverse and release the lever. The lever should return to neutral on its own. If not see reverse spring detent adjustment.

Run engine full throttle to make sure wheels do not rotate. Readjust if any rotation occurs.

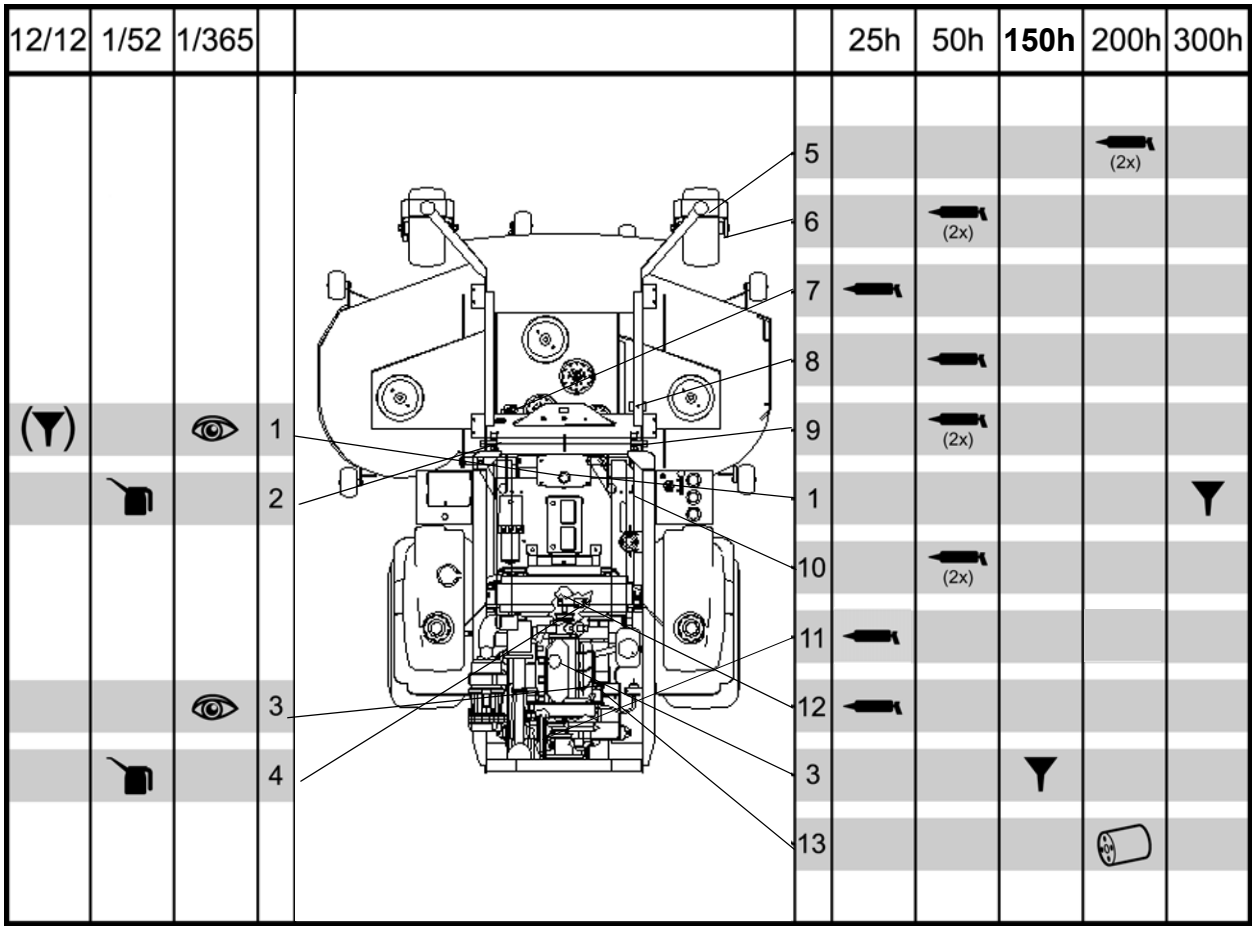
Repeat the whole process for the opposite side and tighten the nuts against the ball joints.

Turn machine off.

Reinstall the seat rod and check the wiring harness to the seat safety switch for a good connection and return the seat to the normal position.

Lubrication

Lubrication Schedule



Lubrication schedule

General

Remove the ignition key to prevent unintentional movements during lubrication.

When lubricating with an oil can, it should be filled with engine oil.

When lubricating with grease, unless otherwise stated, a lithium based grease or another chassis or ball bearing grease, offering good corrosion protection should be used.

With daily use, the machine should be lubricated twice weekly.

Wipe away excess grease after lubrication.

It is important to avoid getting lubricant on the belts or the drive surfaces on the belt pulleys. Should this happen, attempt to clean them with spirits. If the belt continues to slip after cleaning with spirits, it must be replaced. Gasoline or other petroleum products must not be used to clean belts.

Lubricating the Cables

If possible, grease both ends of the cable and move the controls to end stop positions when lubricating. Refit the rubber covers on the cable after lubrication. Cables with sheaths will bind if they are not lubricated regularly. If a cable binds, it can disrupt operation.

If a cable binds, remove the cable and hang it vertically. Lubricate it with thin engine oil until the oil begins to escape from the bottom.

Tip: Fill a small plastic bag with oil and tape it so that it seals against the sheath and allow the cable to hang vertically from the bag overnight. If you do not succeed in lubricating the cable, it must be replaced.

Lubricating in Accordance with the Lubrication Schedule

1. Hydraulic System, Oil Level

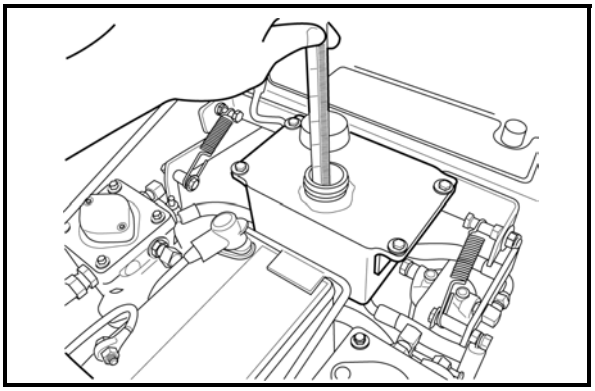
The hydraulic oil and filter shall be replaced every 300 hours, and at least once a year. Contact an authorized service workshop.

Check the oil level in the hydraulic tank daily. The level should be about 3/4"-1" below the top of the tank.

Check connections, hoses, and tubes for damage or leaks. Replace or repair if doubtful.

Changing Oil and Filters

Oil and filter changes should be carried out by an authorized service center.



8011-565

Checking the hydraulic oil

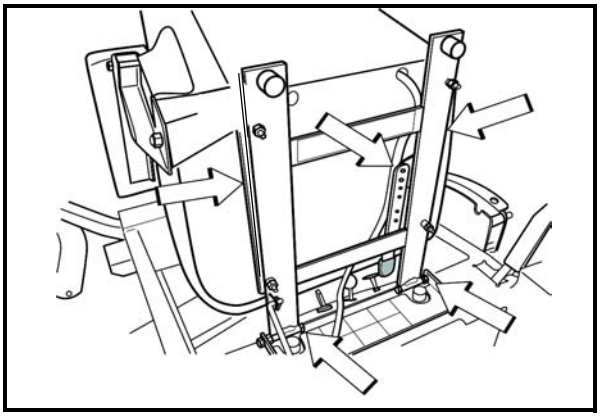
2. Driver's Seat

Tip the seat.

Lubricate the linked mount at the front using an oil can.

Lubricate the lengthways adjustment mechanism with the oil can.

Lubricate the lengthways adjustment runners with the oil can.



Lubricating the lengthways adjuster under the seat

3. Engine Oil

Changing the Engine Oil

Change the engine oil and filter for the first time after 50 hours of operation. Thereafter, the oil should be changed every 150 hours and the filter every other oil change.

WARNING!

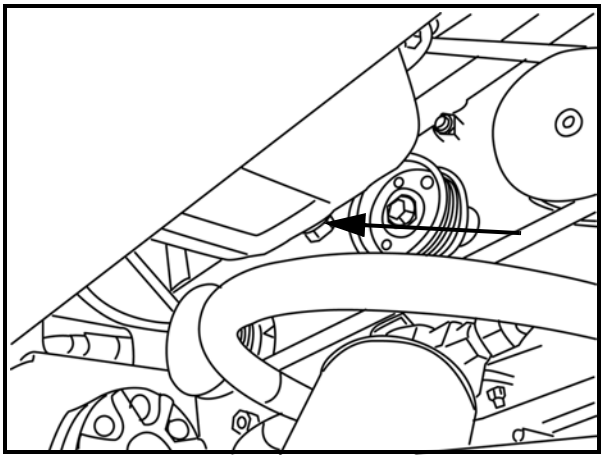
Engine oil can be very hot if it is drained directly after stopping the engine. Allow the engine to cool.

IMPORTANT INFORMATION

Used engine oil is a health hazard and must not be disposed of on the ground or in nature; it should always be disposed of at a service center or appropriate disposal location.

Avoid skin contact; wash with soap and water in case of spills.

1. Place the machine on a flat surface.
2. Place a container under the engine. Choose which drain plug is the lowest.
3. Remove the dipstick and open the drain plug.
4. Allow the oil to run out into the container.
5. Then close the oil drain plug.
6. Replace the oil filter if necessary.
7. Fill with new engine oil in accordance with Checking the Oil Level.



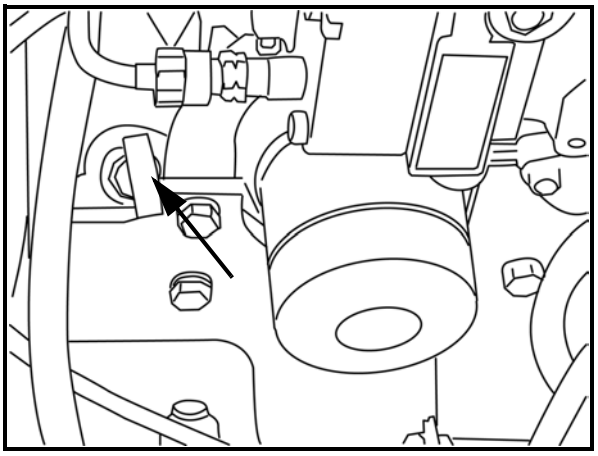
Oil drain plug BAM-22

Checking the Oil Level

Check the oil level in the engine when the machine is standing horizontally and the engine is stopped.

Remove the dipstick, wipe it clean, and then replace it.

Take the dipstick out again and read the oil level.

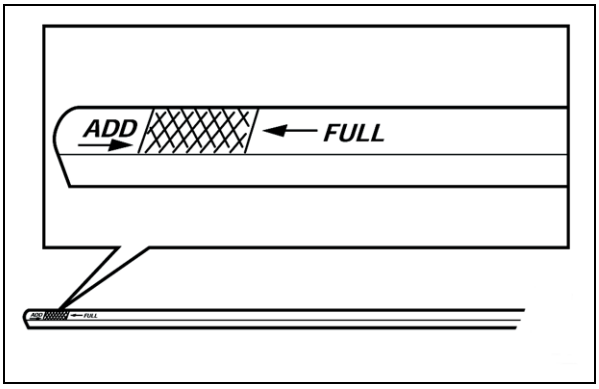


Remove the dipstick BAM-23

The oil level should be between the markings on the dipstick. If the level is approaching the ”ADD” mark, add the oil to the ”FULL” mark on the dipstick.

Never fill above the ”FULL” mark.

The oil is topped off through the dipstick hole.



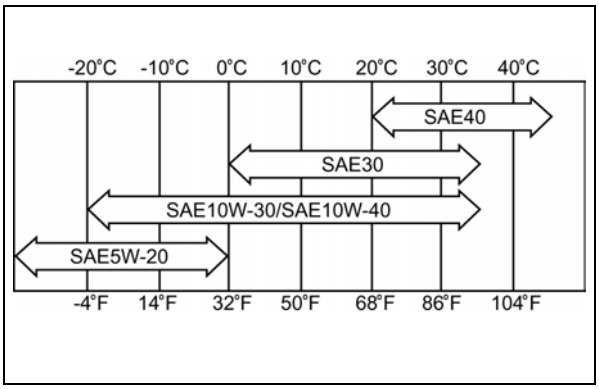
The dipstick markings

Use engine oil SAE 30 or SAE 10W-30 or, alternately, 10W/40, class CF - 4, CI - 4 (over 0 °C/+32 °F).

Over +20 °C/+68 °F SAE 40 can be used.

Use engine oil SAE 5W-20, class CF - 4, CI - 4(under 0 °C/+32 °F).

The engine holds 3.5 quarts of oil including the filter.



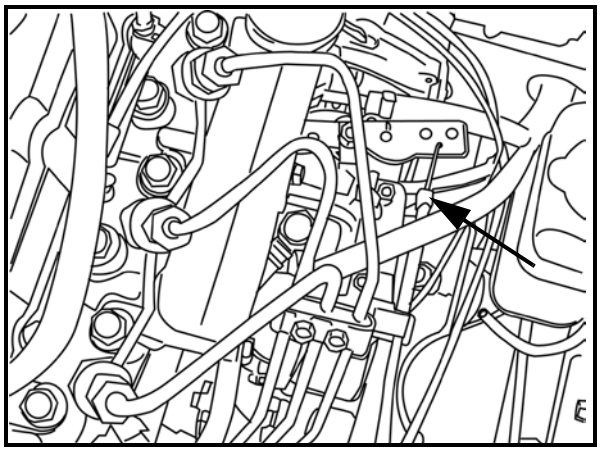
8009-140

Engine oils

4. Throttle Cable, Lever Bearings

Lubricate the cable ends by the lever with an oil can. Move the controls to the end points and lubricate again.

The throttle cable is also lubricated by the control when the control console is removed.



Throttle cable BAM-14

5. Front Wheel Mount

Lubricate with a grease gun, one zerk for each wheel mount, use 10 pumps of the grease gun at the recommended service intervals. Use only good quality lithium based grease.

Grease from well-known brand names (petrochemical companies, etc.) usually maintains a good quality.

6. Front Wheel Bearings

Lubricate with a grease gun, one zerk for each set of wheel bearings, 3 to 5 pumps of the grease gun at the recommended service intervals. Use only good quality lithium based grease.

Grease from well-known brand names (petrochemical companies, etc.) usually maintains a good quality.

7. Belt Adjuster, Mower Deck

Remove the foot plate (two screws) and lubricate with a grease gun, one zerk, until grease is forced out.

Use only good quality lithium based grease.

Grease from well-known brand names (petrochemical companies, etc.) usually maintains a good quality.

IMPORTANT INFORMATION

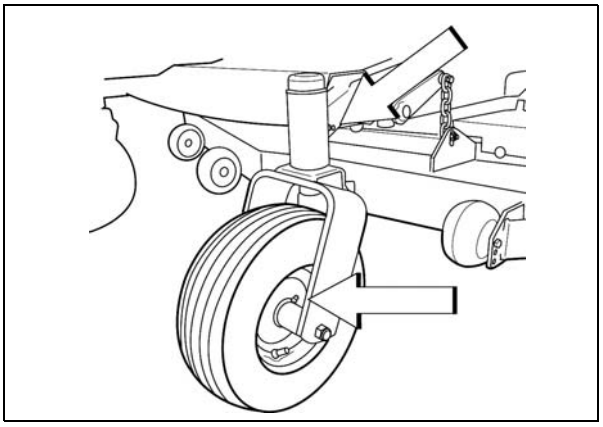
Be careful and remove excess lubricant so that is does not come into contact with belts or belt pulley drive surfaces.

8. Mower Deck Height Adjuster

Lubricate using a grease gun, one zerk, until the grease squeezes out.

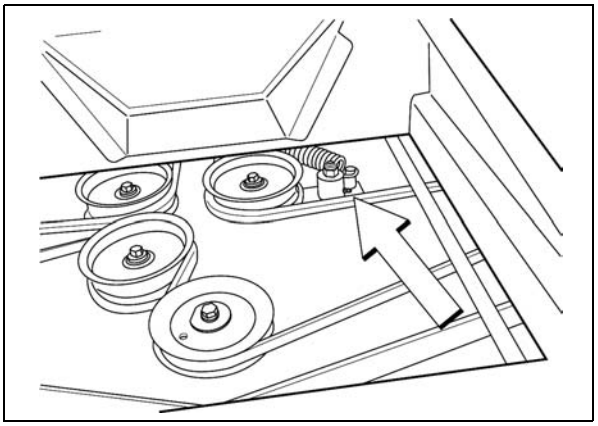
Use only good quality lithium based grease.

Grease from well-known brand names (petrochemical companies, etc.) usually maintains a good quality.



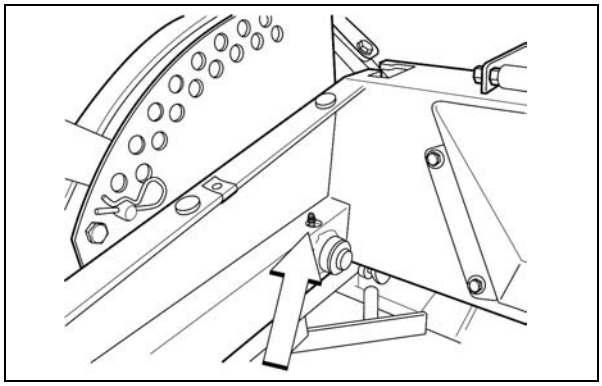
8011-573

Lubricating the front wheels



8011-576

The belt adjuster grease nipple



8011-574

Lubricating the cutting height adjuster

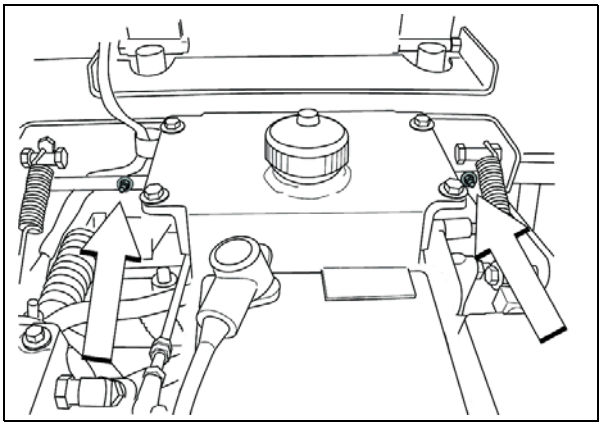
9. Steering Control Shafts

Tip the driver's seat.

Lubricate with a grease gun, one zerk for each steering control shaft, until the grease is forced out.

Use only good quality lithium based grease.

Grease from well-known brand names (petrochemical companies, etc.) usually maintains a good quality.



8011-578-2

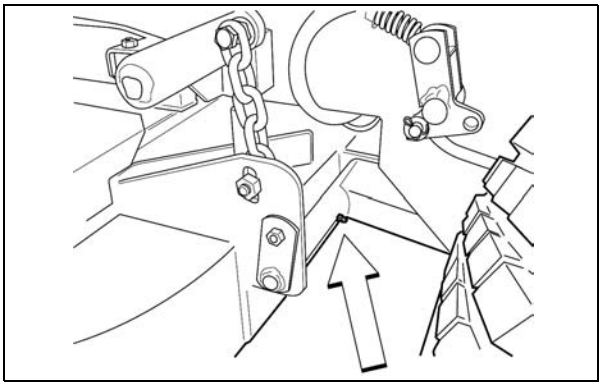
Lubricating the steering control shafts

10. Mower Deck Struts

Lubricate with a grease gun, one zerk for each strut, until the grease is forced out.

Use only good quality lithium based grease.

Grease from well-known brand names (petrochemical companies, etc.) usually maintains a good quality.



8011-577

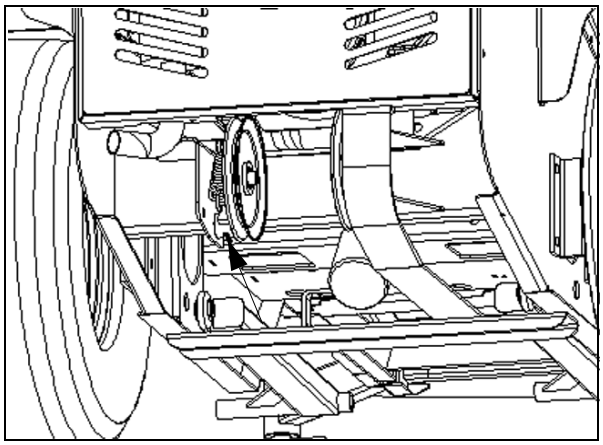
Lubricating struts

11. Belt Adjuster - Mule Drive Idler Arm

Lubricate with a grease gun, one zerk, until the grease is forced out.

Use only good quality molybdenum disulphide grease.

Grease from well-known brand names (petrochemical companies, etc.) usually maintains a good quality



Lubricating mule drive idler arm

IMPORTANT INFORMATION

Be spartan and remove excess lubricant so that is does not come into contact with belts or belt pulley drive surfaces.

12. Belt Adjuster, Hydraulic Pumps

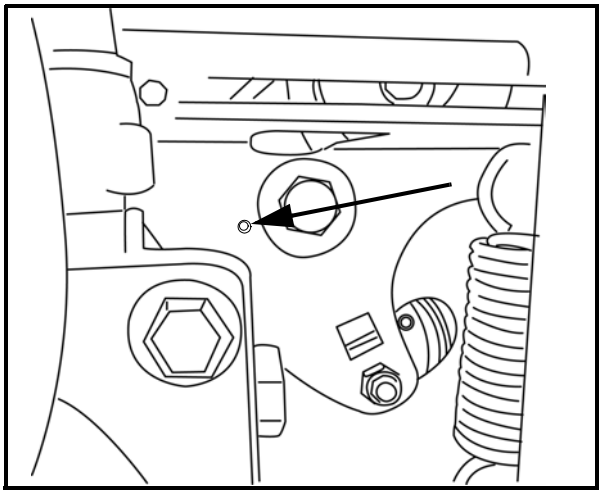
Lubricate using a grease gun, one zerk, until the grease squeezes out.

Use only good quality lithium based grease.

Grease from well-known brand names (petrochemical companies, etc.) usually maintains a good quality.

IMPORTANT INFORMATION

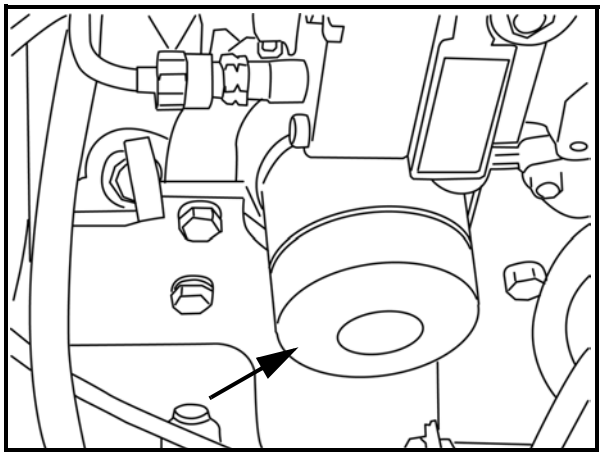
Be careful and remove excess lubricant so that is does not come into contact with belts or belt pulley drive surfaces.



Lubricating the belt adjuster BAM-24

13. Changing the Oil Filter

1. Drain the engine oil in following the procedure in the section, Engine Oil/ Change Engine Oil.
2. Disassemble the oil filter. If necessary, use a filter remover.
3. Partially fill the new filter with oil.
4. Wipe new, clean engine oil onto the seal for the new filter.
5. Mount the filter by hand with + 3/4 turn.
6. Run the engine warm, then check that there are no leaks around the oil filter seal.
7. Check the oil level in the engine, top off if necessary.



Changing the oil filter BAM-24

TROUBLE SHOOTING GUIDE

Trouble Shooting Guide

Problem	Cause
The engine will not start.	• The control for engaging the mower deck is not depressed. • The steering controls are not locked in the neutral position. • The driver is not sitting in the driver's seat. • The parking brake is not activated. • The battery is dead. • Contamination in the fuel line. • The fuel supply is closed or the valve for the fuel tanks is in the wrong position. • Clogged fuel filter or fuel line.
The starter motor does not turn the engine over.	• Dead battery. • Poor contacts on the battery terminal cable connections. • Fuse blown. • Ignition system faulty.
The engine runs unevenly.	• Defective valves. • Defective piston, cylinder, piston ring, or cylinder head seal. • The cylinder head bolts are loose. • Clogged fuel filter or jet. • Clogged ventilation valve on the fuel cap. • Fuel tank nearly empty. • Wrong fuel type. • Water in the fuel. • Clogged air filter.
The engine seems weak.	• Clogged air filter.

TROUBLE SHOOTING GUIDE

The engine overheats.	• Clogged air intake or cooling fins. • Engine overloaded. • Poor ventilation around engine. • Defective engine speed regulator. • Soot in the combustion chamber. • Too little or no oil in the engine. • Water pump not working. • Coolant system clogged. • Coolant level low.
Battery not charging.	• Poor contact with battery terminal cable connectors.
The machine moves slowly, unevenly, or not at all.	• Parking brake on. • Venting valve on pump open. • Drive belt for the pump slack or has come off. • Defective hydraulic system. • Air in the hydraulic system.
Mower deck not engaging.	• Drive belt for the mower deck has come loose. • Contact for the electric clutch has loosened. • The control for engaging the mower deck is faulty or has come loose from the cable contact. • The fuse has blown.
Uneven mowing results.	• Different air pressure in the tires on the left and right sides. • Bent blades. • The chains suspending the mower deck are uneven. • The blades are blunt. • Driving speed too high. • The grass is too long. • Grass collected under the mower deck.

TROUBLE SHOOTING GUIDE

The machine vibrates.	• The blades are loose. • The blades are incorrectly balanced. • The engine is loose. • Wheels loose.

Storage

Winter Storage

At the end of the mowing season, the machine should be readied for storage (or if it will not be in use for longer than 30 days). Fuel allowed to stand for long periods of time (30 days or more) can leave sticky residues that can disrupt engine function.

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WARNING!

Never store an engine with fuel in the tanks indoors or in poorly ventilated spaces where fuel vapor can come in contact with open flames, sparks, or a pilot light such as in a boiler, hot water tank, clothes drier, etc. Handle the fuel with care. It is very flammable and careless use can cause serious personal injury and property damage. Drain the fuel into an approved container outdoors and far away from open flame. Never use fuel for cleaning. Use a degreaser and warm water instead.

To ready the machine for storage, follow these steps:

1. Thoroughly clean the machine, especially under the mower deck. Touch up damage to the paint and spray a thin layer of oil on the underside of the mower deck in order to avoid corrosion.
2. Inspect the machine for worn or damaged parts and tighten any nuts or screws that may have become loose.
3. Change the engine oil; dispose of properly.
4. Empty the fuel tanks or add a fuel stabilizer. Start the engine and allow it to run until the stabilizer has reached the injectors.
5. Remove glow plugs and pour about a tablespoon of engine oil into each cylinder. Turn over the engine so that the oil is evenly distributed. Replace glow plugs.
6. Lubricate all grease zerks, joints, and axles.
7. Remove the battery. Clean, charge, and store the battery in a cool place, but protect it from direct cold.
8. Store the machine in a clean, dry place and cover it for extra protection.

Service

When ordering spare parts, please specify the purchase year, model, type, and serial number.

Always use genuine Yazoo/Kees spare parts.

An annual check-up at an authorized service workshop is a good way to ensure that your machine performs its best the following season.

Technical Data

Measurements, Weights, Etc.

Length	95 in.		
Width (lowered discharge chute)	74 in.(61” deck), 85 in. (72” deck)		
Width (raised discharge chute)	62 in. (61” deck), 73 in. (72” deck)		
Height	46.5 in.		
Weight	BZ6127D	BZ6134D	BZ7234D
	1540 lbs.	1580 lbs.	1620 lbs.
Cutting width	61 in. and 72 in.		
Cutting height	Adjustable 1.5” to 6” in 1/4” incriments		
Air pressure, front and rear	16 psi		
Tires, front	13” x 6.50 - 6, 4-ply smooth tread		
Tires, rear	26” x 12.00 - 12, turf		
Driver’s seat	Adjustable lengthways with adjustable arm rests		
Speed, forward	0-11.5 mph		
Speed, backward	0-5 mph		

Engine

Manufacturer	Diahatsu, 3 cylinder, diesel, 27 HP and Diahatsu, 3 cylinder, diesel turbo, 34 HP
Models	DM 950D and DM954TD
Power	27 HP and 34 HP
Cylinder volume	952 cm^3
Max. engine speed	3600 rpm @ no load
Idle speed	1300 rpm
Fuel tanks	11.4 gal. - twin 5.7 gal. tanks
Nominal action time	11 hours
Fuel	Diesel with a minimum of 40 cetane
Oil	SAE 30 or SAE 10W/30, SAE 10W/40 class SC -SH
Oil volume incl. filter	3.5 qt
Start	Electric start

Clutch

Electric w/intragal stop brake rating

torque rating 300 ft./lbs.

TECHNICAL DATA

Noise Emissions and Cutting Width

Measured noise level	YY dB(A)
Guaranteed noise level	105 dB(A)
Cutting width	61 in. and 72 in.

Electrical System

Type	12 V, negative earth
Battery	12 V, maintenance-free
Primary fuse	Flat pin 20 A
Electric clutch	Electromagnetic

Transmission

Hydrostatic drive	2 axial piston pumps with Parker Ross wheel motors
Hydraulic oil, volume	1 1/8 gallon
Hydraulic oil, type	15W-50 Synthetic

Mower Deck

Cutting width	61 in. and 72 in.
Cutting height	Adjustable 1.5” to 6” in 1/4” incriments
Blade length	3 - 21” for 61” deck and 3 - 25” for 72” deck
Anti-scalp rollers	Adjustable, 6 for 61” deck and 8, 6-adjustable for 72” deck

Accessories

Mulch kit attachment

Foot operated mower deck (certain models)

When this product is worn out and no longer used, it should be returned to the reseller or other party for recycling.

In order to implement improvements, specifications and designs can be altered without prior notification.

Note that no legal demands can be placed based on the information contained in these instructions.

Use only original parts for repairs. The use of other parts voids the guarantee.

Service Journal

Action	Date, mtr reading, stamp, sign
Delivery Service	
1. Charge the battery.	☐
2. Mount the rear wheels.	☐
3. Adjust the tire pressure of all wheels to 16 PSI.	☐
4. Mount the steering controls in the normal position.	☐
5. Connect the lever to the seat stop.	☐
6. Connect the contact box to the cable for the seat's safety switch.	☐
7. Mount the arm rests on the seat's back support.	☐
8. Check that the right amount of oil is in the engine.	☐
9. Check that the right amount of oil is in the hydraulic tank.	☐
10. Adjust the position of the steering controls.	☐
11. Fill with fuel and open the fuel shut-off.	☐
12. Connect the exhaust fumes extractor.	☐
13. Start the engine.	
14. Check that there is drive to both wheels.	☐
15. Vent the hydraulic system if necessary.	☐
16. Check the mower deck adjustment.	☐
17. Check:	
The safety switch for the parking brake.	☐
The safety switch for the mower deck.	☐
The safety switch in the seat.	☐
The safety switch in the steering controls.	☐
Parking brake functionality.	☐
Driving forward.	☐
Driving backward.	☐
Engaging the blades.	☐
18. Check the idle speed 1300 rpm.	☐
19. Check the engine speed 3600 rpm	☐

SERVICE JOURNAL

Action	Date, mtr reading, stamp, sign
20. Inform the customer about: The need and advantages of following the service schedule. The need and advantages of leaving the machine for service every 300 hours. The effects of service and maintaining a service journal on the machine's resale value. Application areas for Mulch kit. 21. Fill in the sales papers, etc.	Delivery service has been carried out. No remaining notes. Certified:
After the First 50 Hours 1. Change engine oil and filter.	☐

Action	Date, mtr reading, stamp, sign
Daily 1. Check hydraulic oil level. 2. Check engine oil level. 3. Check coolant level in the overflow reservoir. 4. Check air cleaner dust load indicator. 5. Check/clean radiator debris guard.	

SERVICE JOURNAL

Action	Date, mtr reading, stamp, sign
25-Hour Service 1. Check the hydraulic system's oil level. 2. Check the tire pressures. 3. Lubricate the belt adjuster, mower deck. 4. Lubricate the belt adjuster, hydraulic pumps. 5. Lubricate the belt adjuster, mule drive.	

SERVICE JOURNAL

Action	Date, mtr reading, stamp, sign
50-Hour Service 1. Perform the 25-hour service. 2. Change oil and oil filter for the first time. See engine manual. 3. Check dust load indicator on air filter.Change filter only if indicator is red. See engine manual. 4. Lubricate the front wheel bearings. 5. Lubricate the steering control shafts. 6. Lubricate the mower deck struts. 7. Lubricate the cutting height adjuster. 8. Check/adjust the parking brake.	

SERVICE JOURNAL

Action	Date, mtr reading, stamp, sign
100-Hour Service 1. Perform the 25-hour service. 2. Perform the 50-hour service. 3. Change engine oil at 150 hours. See engine manual. 4. Check fuel pump filter. See engine manual. 5. Check fan belt clearance. See engine manual. 6. Clean the cooling fins on the engine and transmission.	

SERVICE JOURNAL

Action	Date, mtr reading, stamp, sign
300-Hour Service 1. Inspect the machine. Come to agreement with the customer as to which additional work is to be carried out. 2. Perform the 25-hour service. 3. Perform the 50-hour service. 4. Perform the 100-hour service. 5. Check/replace the air cleaner's safety element. 6. Change engine oil filter.	

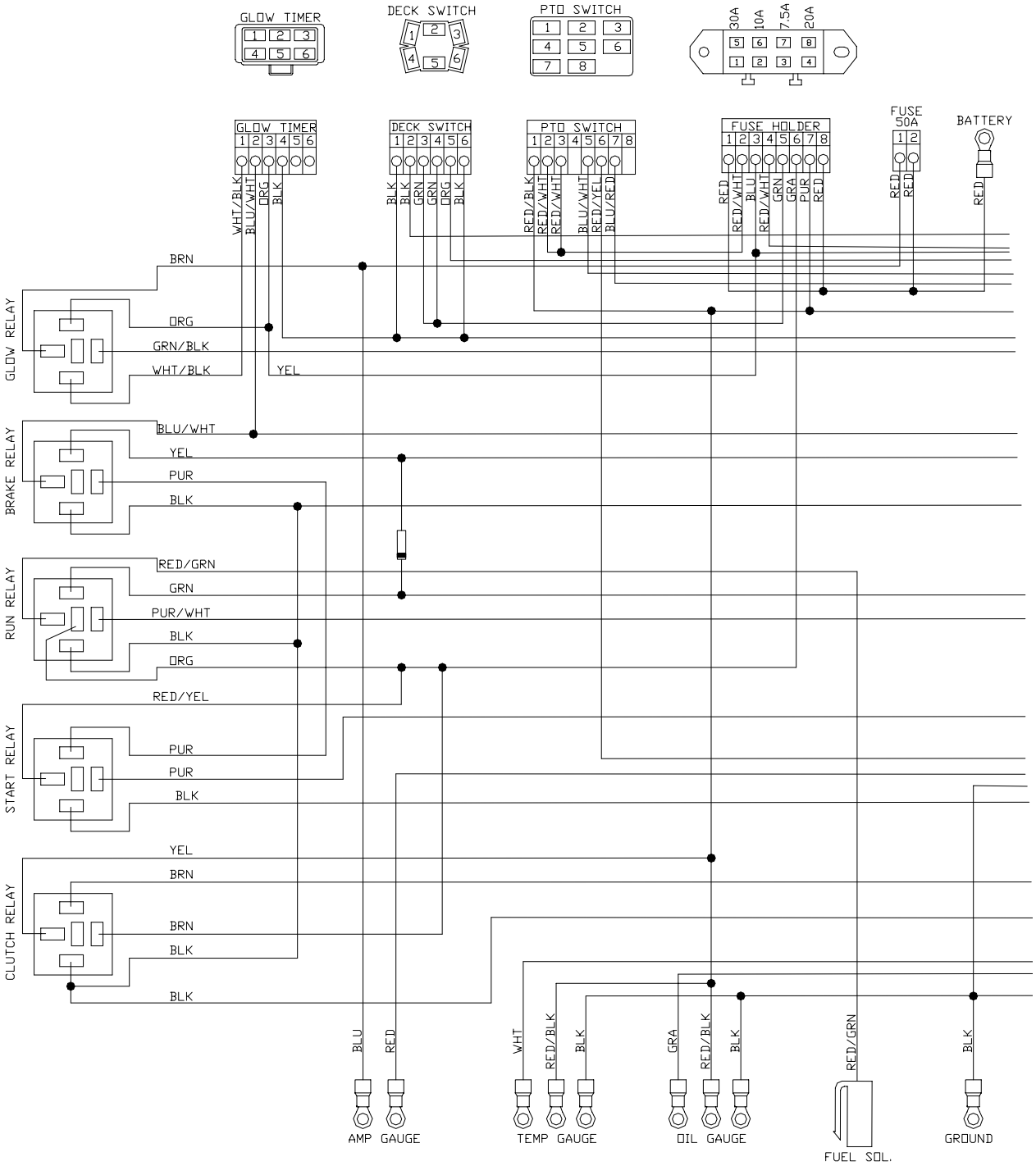
SERVICE JOURNAL

Action	Date, mtr reading, stamp, sign
At Least Once Each Year 1. Replace the air cleaner's safety element. 2. Replace the air filter's paper cartridge. 3. Change the engine oil (150 hours). 4. Replace the engine oil filter (300 hours). 5. Change the oil and filter in the hydraulic system (300 hours). 6. Check/adjust the cutting height. 7. Check/adjust the parking brake (50 hours). 8. Change the fuel filter (100 hours). 9. Clean the cooling fins (100 hours). 10. Check the play in the engine valves (300 hours). 11. Perform the 300-hour service at an authorized service workshop.	

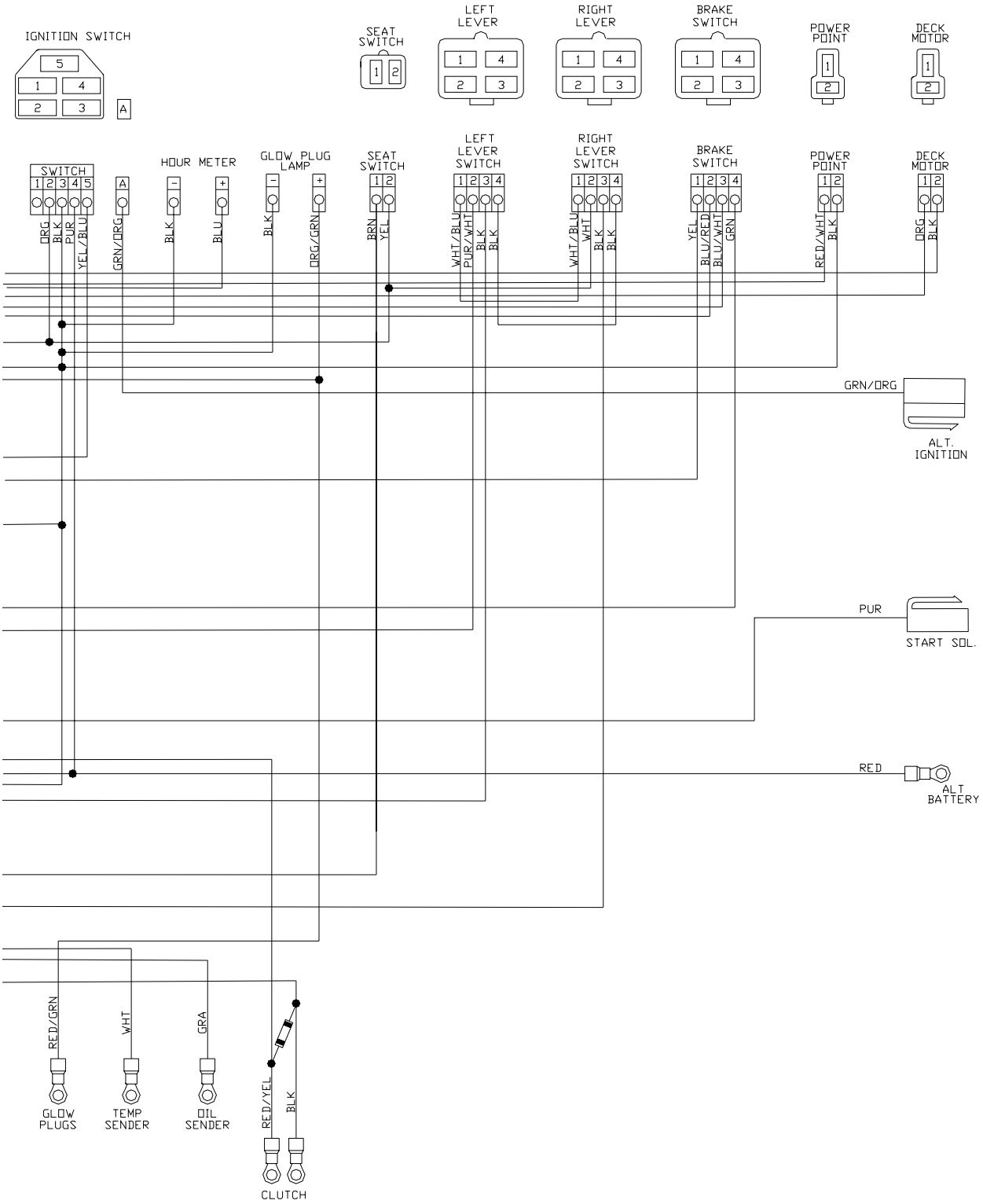
SERVICE JOURNAL

Action	Date, mtr reading, stamp, sign

WIRING SCHEMATIC



WIRING SCHEMATIC



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